

JULY 1960 • 40 CENTS

CONSUMER BULLETIN

The original consumer testing magazine



REFRIGERATOR-FREEZERS TESTED

Bargains from abroad

Grape-Nuts—a big change

Tests of

Other test reports

HEDGE TRIMMERS

Outboard motors

Comet automobile

ELECTRONIC FLASH UNITS

Hazards of nuclear tests

Devices to drain basements

PUBLISHED SINCE 1928

BY CONSUMERS' RESEARCH, INC., WASHINGTON, NEW JERSEY

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Grape-Nuts improves its product—

*by leaving out a few
very modern ingredients*

In the February 1960 CONSUMER BULLETIN, we showed a picture of a package of *Grape-Nuts* with a label specifying the ingredients as follows:

POST GRAPE-NUTS IS MADE FROM WHEAT, MALTED BARLEY, SALT, YEAST, BUTYLATED HYDROXYANISOLE AND BUTYLATED HYDROXY-TOLUENE IN CORN OIL WITH ACETYL TARTRATE MONO AND DIGLYCERIDES ADDED AS CHEMICAL PRESERVATIVES TO HELP MAINTAIN FRESHNESS; NIACIN, VITAMIN B₁.

In discussing this list of ingredients, we raised an important question: Who could possibly give the consumer assurance of the safety for day-to-day consumption by young and old of the many added chemicals with their strange and unfamiliar names? We remarked that some of our readers might wish to correspond with the Post Division of General Foods in Battle Creek, Michigan, and see what justification the manufacturer could offer for inclusion of so many and such strange ingredients in a breakfast food, and what evidence General Foods could furnish on the basis of the knowledge of independent scientists that each and every one of the chemical additives would be harmless to one and all of the consumers of *Grape-Nuts* over a period of years.

A good many of our subscribers did write to General Foods, pointing out their objections to eating quantities, however small, of butylated hydroxyanisole, butylated hydroxytoluene, acetyl tartrate mono- and diglycerides.

One subscriber pointed out that *Grape-Nuts* was not the only product on the market today containing such a startling list of additives—that it was rare indeed for any commercially processed food not to contain them. And “why,” he asked,

“do you find it necessary to add so many weird-sounding chemicals to an otherwise wholesome and nutritious food product?”

Our readers have sent to Consumers' Research a number of replies they received from General Foods. In these replies, the manufacturer's representatives contented themselves with the familiar intimations that General Foods “knows best” and that consumers need not have any concern whatever about unfamiliar ingredients, for the government has approved them; that General Foods uses the criticized ingredients only because they make the product better for the consumer. Such a reply does not tell the whole truth, for the manufacturer's concern to give his product a long shelf life, while in a sense legitimate, is primarily of a commercial nature. He likes the idea of “durability” in foods and finds it economical to have products remain on the grocer's shelf without any evident deterioration, even if some of the ingredients required to bring about this result may sound to the uninformed layman as though they might be part of a formula for a new kind of plastic foam or wallpaper paste.

As to General Food's argument that ingredients such as butylated hydroxyanisole have been approved by the Food and Drug Administration as being safe for human consumption, one only needs to be reminded that government food and beverage officials have in the past considered unobjectionable or harmless many chemical additives later found to be unsafe. Among such chemicals was monochloroacetic acid, used over a considerable period as a preservative of beer and wine and certain other food products (later disclosed to be toxic by the severe illness of a large number of

(Continued on page 13)



The Consumers' Observation Post

THE NEW COMPACT CARS are beginning to compete with the little foreign cars for the consumer's favor. Production in April for U.S. compacts was around 31 percent of total automobile output. Foreign car sales in March 1960 dropped slightly from the September 1959 figure of 53,000 and were reported to be getting a smaller share of the expanding U.S. market. Auto manufacturers are beginning to wonder if the small cars are not here to stay. There are certainly many thrift-minded consumers who are tired of overpowered gas eaters.

* * *

SWIMMING POOLS are an increasingly popular home improvement. In fact, swimming is so popular that one hotel executive has commented that nobody would think of building a new motel without a pool at the present time. There are many plastic pools that can be set up in the back yard like a bathtub and filled with water, but a new do-it-yourself in-the-ground type is making its appearance this year in California. The pool, manufactured by the Coraloc Industries, Inc., of Beverly Hills, uses concrete and steel. The kit for an 18 by 36 foot pool includes a direction manual, interlocking steel wall panels, all nuts, bolts, and hardware needed, sealer strips, waterproof surfacing, forms for steps, filter system, and diving board and ladder, for \$1850 (plus installation costs of \$700 to \$900). The purchaser must furnish his own concrete, a not inconsiderable item of expense. The manual also supplies an estimate of the cost of having the excavation dug for those who don't want to work that hard. Just how successful the do-it-yourself family will be in making such an installation will vary according to individual skills and energy. We hope that any subscribers who undertake the job will give us a first-hand report of their experience, and the costs involved.

* * *

HOW GOOD IS YOUR SERVICEMAN AS A DIAGNOSTICIAN? There are too many men in the repair service field who try to fix a balky appliance by trying one part after another until they come across one that works. As P. T. Brockwell, Jr., in Electrical Merchandising Week, points out, such workers are slow and sometimes they undo nothing that they have tried. In seeking to restore an electric oven to operation, such a serviceman may first try replacing the new thermostat (\$25) without success. Then he installs a new switch (\$7). That puts the oven into operation, but he does not remove the unneeded thermostat, and bills the customer for it. Mr. Brockwell recommends that executives of service agencies try to develop these "parts changers" into efficient appliance repairmen by supplementary training and additional service literature.

* * *

THE FASHIONABLE DRINK of "tonic with..." can be a cause of considerable distress to those who have an idiosyncrasy to quinine. One British physician writing to the editor of the British Medical Journal reported that a patient had experienced throbbing in the head followed by violent muscular cramps in the legs, arms, back, and neck, and sometimes brief periods of unconsciousness, after taking even the smallest amount of tonic water.

* * *

SITTING FOR ANY CONSIDERABLE LENGTH OF TIME is likely to cause edema or swelling of various parts of the body. Traveling by bus or by air on long trips is frequently the cause of what Lt. Col. M. J. Nareff, M. D., calls "passenger phlebitis." He points out that the symptoms of this affliction include pain or tenderness in the calf of the leg, lameness, painful walking, persistent or recurrent edema, and chest pain or hemoptysis (spitting of blood).

TRAMPOLINING, the latest development in gymnastics, is likely to arrive from the West Coast any day now. Indoors and outdoors, by day and by night, trampoline centers in Southern California are crowded with enthusiasts who pay 40 cents a half hour (in the outdoor lots) to bounce on nylon "beds" stretched at ground level over a pit that is three feet deep. Although the centers cater mostly to teenagers, some interest is being shown in the device by women who want to take off excess poundage.

* * *

SYNTHETIC RUBBER is making its appearance in many new or improved products. The Wall Street Journal reports that, thanks to a new type of chemistry, rubber companies now foresee the day when they will be able to get along without the rubber tree. They look forward to designing rubber to fit each customer's particular needs for a certain degree of toughness or extreme resistance to heat, aging, or solvents. The new rubber coating on a certain make of golf balls, for example, now keeps them white longer and makes them more resistant to cutting blows. New rubber work shoe soles from one manufacturer were found to last three times as long as previous soles. Synthetic rubber hose that will last 20 years is promised in the not too distant future. The sale in 1955 of 26 synthetic rubber plants by the Federal Government to private industry has spurred the improvement in quality and an increase in output. New synthetics have also played a part in producing better quality. The rubber scientists claim that so many promising developments are coming along that no one wants to stabilize on equipment and processes at the present time.

* * *

SOMETHING NEW IN ZIPPERS should be available by fall. The manufacturer, Talon, Inc., of Meadville, Pa., is putting out a zipper called the Zephyr, made of two spirals of thin nylon filament that interlock to hold a garment together. If a piece of fabric gets caught, it may be released instantly by bending the fastener to pop the coils apart. The fastener is re-engaged by bending it backwards. The price of the zipper will limit its use to higher-priced garments at first, but it is expected that eventually it will displace metal zippers in a wide range of clothing.

* * *

BARGAINS AT THE SUPERMARKET may not always save money. Consider the hidden costs of making a special trip for such purchases. Of course, if the items are picked up during the regular weekly shopping trip, that is another matter.

* * *

WISCONSIN CANNERS are making certain that the fruits and vegetables from that state are free from weed killers, insecticides, and other chemicals. The Wisconsin Cannery Association is putting trained men into the field to make periodic inspections from planting to harvest time to see that chemicals used are on the approved list. One canner is so concerned that he wrote all his grower contractors that no weed-killing chemicals should be used except when applied by his own company-trained operators.

* * *

HOUSEHOLD APPLIANCES are lower in price this year as manufacturers trim frills and introduce "promotional" models. The Wall Street Journal reports that Kelvinator has introduced a two-door refrigerator at \$300, identical with the one that sold for \$350 last year, except that the shelves are fixed instead of roll-out. Frigidaire is bringing out a new freezer priced at \$198, only one cubic foot smaller than its 1959 counterpart, but priced at 20 percent less. Norge is marketing a new clothes washer selling for \$179, with only a change in the color of trim, that is \$10 cheaper than the previous model. The Wall Street Journal notes that other manufacturers are rushing to get out new, lower-priced "promotional" models, and that is good news for consumers who will need to buy some new major appliance. In essentials and in performance, promotional appliances are practically identical with the higher-priced models.

(The continuation of this section is on page 37)

Consumer Bulletin

THE ORIGINAL CONSUMER INFORMATION MAGAZINE

Consumers' Research is a non-profit institution. It is organized and operates as a scientific, technical, and educational service for consumers. The organization has no support from business or industry. Its funds come solely from the ultimate consumers who read Consumer Bulletin.

Scientific and technical staff, editors, and associates: F. J. Schlink, R. Joyce, D. C. Allen, M. C. Phillips, Erma A. Hinek, F. X. Hinek, Donald M. Berk, and A. R. Greenleaf. Editorial Assistants: Mary F. Roberts, B. Beam, and Ellen J. Snyder. Business Manager: C. D. Cornish.

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For a change of address, give your old address as well as your new one, including postal zone number. Allow five weeks for the change to become effective.

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Listings usually are arranged in alphabetical order by brand name (not in order of merit) under each quality or performance rating. A numeral 1, 2, or 3 at the end of a listing indicates relative price, 1 being low, 3 high. Where the 1, 2, 3 price ratings are given, brands in the 1, or least expensive group, are listed alphabetically, followed by brands in price group 2, also in alphabetical order, etc. A quality judgment is wholly independent of price.

This publication is authorized to be mailed at the special rate of postage prescribed by Sec. 132.122, Postal Manual.

Entered as second-class matter, November 9, 1934, at the Post Office at Washington, N. J., under the Act of March 3, 1879; additional entry at Easton, Pa. Printed in U.S.A.

VOL. 43, NO. 7

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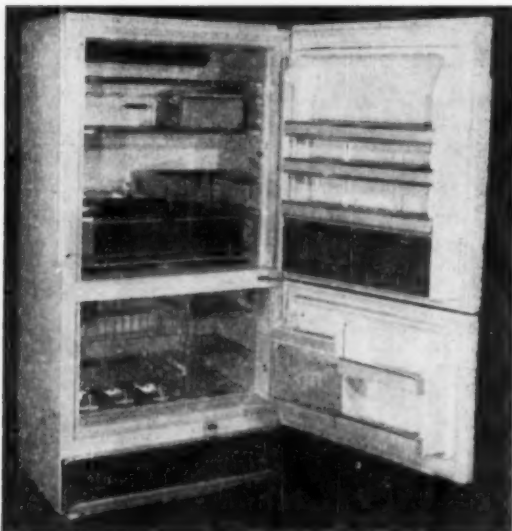
Refrigerator-freezer combinations

BOTH refrigerators and refrigerator-freezers have full-width freezer compartments, and on this account most people do not realize there is a vitally important difference between the two types of appliance. If you contemplate buying, be sure you have a clear idea of the difference between the refrigerator and the refrigerator-freezer, for if you buy a refrigerator when what you really need is a refrigerator-freezer, the results can be very disappointing.

Some manufacturers have done little to eliminate this confusion or adopt clear standards of nomenclature. Indeed, some refer to both types of appliance as refrigerators; others designate some of their combination appliances as having "zero degree" freezers or "true freezers." The following definitions should help to dispel some of the confusion which exists in consumers' minds.

Refrigerator-freezer combinations

A satisfactory box of this type should provide temperatures in the freezer close to zero degrees (the low temperature is *necessary* for the proper and safe storage of frozen food and ice cream), with a temperature in the refrigerator section of about 39 degrees. In the refrigerator-freezer, the freezer and refrigerator sections have separate cooling coils and the two compartments are sealed



Coldspot 106.R14G



Amana Free-O-Frost FOF 125

off, completely insulated from each other. Combinations may have either single or double exterior doors. In the type of combination that is not completely self-defrosting, the refrigerator part is cooled by a plate, usually mounted on its rear wall, on which the frost collects; this plate defrosts automatically every time the unit cycles. The freezer in this type of appliance, unless equipped with an automatic or semiautomatic defrosting system, requires manual defrosting about two or three times a year.

In the "fully frostless" type of combination refrigerator-freezer, usually priced about \$100 above the non-defrosting kind, the coils are outside of both the regular food storage space and the freezer space, and are defrosted automatically. (Amana also has coils under the shelf in the freezer.)

Refrigerators

These are not designed to provide a temperature close to zero degrees in the freezer. With the control set to provide 39 degrees in the refrigerator (considered a satisfactory and at the same time reasonably economical temperature for the storage of fresh food), air temperatures in the freezing compartment of different makes of refrigerators will range from about 7 degrees to as high as 25 degrees, depending on the make. At temperatures above 10 degrees, ice cream does not keep well, and frozen foods, even though they may feel solid and

hard, deteriorate in *quality and flavor* at a much faster rate than at zero degrees.

While lower temperatures can be obtained in the freezer compartment by setting the general temperature control of the box for a colder temperature, this change of setting also lowers the temperature in the fresh food compartment, so that it may go to or below freezing temperatures; such low temperatures are, of course, undesirable (and wasteful of electricity).

In a refrigerator the design is such as to permit free air circulation around the freezing compartment to carry cold air downward to the fresh food storage space below. Frost collects on this freezer chamber which must be manually defrosted unless the box is equipped with automatic or semi-automatic defrosting. Refrigerators always have single exterior doors and the two compartments are *not* insulated from each other.

Frostless vs. conventional models

Defrosting has long been an unpleasant chore for the housewife. Early attempts to eliminate this with automatic (in which the defrosting mechanism operated after a set number of door openings or operated by a timer once every 24 hours) or semiautomatic (push-button) defrosting, still available on some makes, have several disadvantages.

In models that used built-in electric coils to melt

the frost, life of the coils has been short and their replacement expensive. In the fully automatic types, frost on the frozen food packages melts during the defrost periods and then refreezes, making the packages difficult to remove. In the semiautomatic types, it is necessary to remove the frozen food to the refrigerator section during defrosting to prevent the packages from being frozen together. The new "frostless" types do not have these disadvantages, but they are relatively expensive to operate, as much as 100 percent more than refrigerator-freezers in which the freezer requires manual defrosting.

Prices

The prices given in the listings and table are mostly manufacturers' suggested list prices. Some manufacturers, however, do not establish suggested retail prices but leave the setting of prices to their various distributors. Actually, the suggested prices have only limited meaning at best because usually a trade-in is involved. The dealer may allow far more than the trade-in refrigerator is worth, as a means to help him in his competition with discount houses, who do not usually accept trade-ins. Sears Roebuck mail-order prices are actual selling prices; Sears also do not usually accept trade-ins. Some of the manufacturers who issue suggested retail prices to their dealers have one or more models on which they do not set any selling price. This model the dealer uses as a bait or loss leader item. Once the prospects are in the store, fast talking salesmanship will very often "trade them up" to other models at figures which give the dealer a handsome profit.

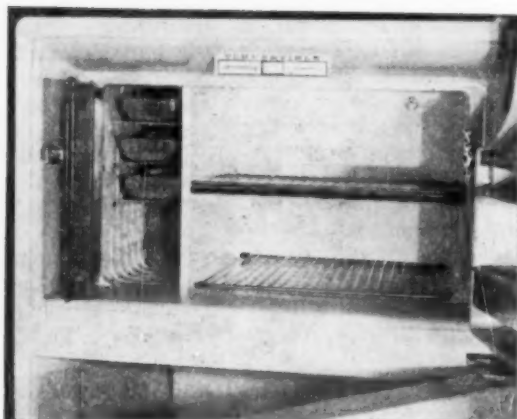
Ads which offer refrigerator-freezers at prices much below suggested list often turn out to be for last year's models; the last year's model may be as good or better than current models, but the consumer may expect it to sell for much less.

* * *

By experience it has been learned that the cost of operating a refrigerator-freezer combination loaded with food and used under average conditions in a home will often be close to the operating cost determined under test conditions in a room held accurately and constantly at 80 degrees. Approximate operating costs at 80 degrees, determined by calculation, are given in Table I, page 9. If there is a considerable "food load," which implies that the refrigerator and freezer from time to time receive quantities of foods that are warm or at room temperature, the energy consumed by the combination in 24 hours at a room temperature of 90 degrees will more closely determine the operating cost to the consumer. A range of variation of plus or minus 5 to 10 percent in energy con-



Philco Convertible 14RD08



This is the convertible freezing compartment of the Philco Model 14RD08. The section to the right can be used either as refrigerator space or as freezer space by merely turning the switch located above the compartment.

sumption of two samples that are nominally alike is said to be common, due to unavoidable non-uniformity in manufacture.

Brands are listed in alphabetical order within the *A* and *B* rated groups.

Frost-free models

A. Recommended

Amana Free-O-Frost, Model FOF 125 (Amana Refrigeration Inc., Amana, Iowa) \$650. A 2-door model with freezer at the bottom.

Performance in test: Time to lower temperature from 110° to 46° (a good measure of the appliance's capacity to operate under abnormal conditions), shorter than average (desirable). Cost of electricity for operation on an adjusted per-cubic-foot basis, about average for the frostless type. Temperature of frozen food, -1.5°. Time to freeze 1 lb. 15 oz. of ice cubes, 2 hr. 30 min. (1.3 hr. per lb.), longer than average.

Comments: Arrangement of space in refrigerator section was judged good and convenient. There was ample room for the storage of a large ham, roast, or turkey without need to remove any shelves. Crispers were sealed with gaskets to reduce the tendency toward drying out of the contents. Door arrangement was good except for location of removable egg trays, which were located at the top of the door and too high for convenient use. One shelf accommodated large bottles or ½-gal. milk containers. Fruit storage bin in door was convenient to use. Food stored in the sliding wire basket of the freezer was fairly accessible but storage on the fixed shelf above the basket was inconvenient. Freezer door was well arranged.

Coldspot, Model 106.R14G (Sears-Roebuck's Cat. No. 46-6560) \$430, plus freight. A 2-door model with freezer at the bottom.

Performance in test: Time to lower temperature from 110° to 46°, shorter than average (desirable). Cost of electricity for operation on an adjusted per-cubic-foot basis,

about average for the frostless type. Temperature of frozen food, 0.0°. Time to freeze 3 lb. of ice cubes, 2 hr. 50 min. (0.95 hr. per lb.), about average.

Comments: Interior of refrigerator well arranged and readily accessible, but a roll-away half shelf and slide-out bottle basket limited ability to store large items. Refrigerator section was lighted by a fluorescent tube. Refrigerator door was opened by a foot pedal. Freezer had a removable wire basket occupying about ½ of the freezer space. This basket was located on a sliding shelf, making contents readily accessible. The freezer door had an ice-cube server and 2 half-width shelves.

B. Intermediate

Frigidaire Frost-Proof, Model FP-142-59 (Frigidaire Div., General Motors Corp., Dayton, Ohio) \$700. A 2-door model with freezer at the bottom.

Performance in test: Time required to lower temperature from 110° to 46°, longer than average. Operating costs, very high. The temperature of the frozen food in the freezer was -8.0°. Compressor ran continuously. Time to freeze 5¼ lb. of ice cubes, 4 hr. 50 min. (0.9 hr. per lb.), satisfactory.

Comments: Shelves in refrigerator section were not adjustable, but arrangement of the space was judged fairly good and convenient to use. Half shelf at top, however, was too high for persons of short or medium height. In addition to the usual vegetable crisper there was a large transparent plastic vegetable crisper in the door. In the freezer, 2 roll-out wire baskets made the contents fairly accessible. The ice-cube ejector, located in the freezer door, was of simple design and operated satisfactorily. Freezer door was operated by a foot pedal. This box would not be a desirable purchase for those to whom high operation costs for electricity would be an important factor. ¶Current Model FPI-15B appears to be essentially the same.

General Electric Frost-Guard, Model BG-155 (General Electric Co., Louisville) \$700. A 2-door model with drawer-type freezer at the bottom.

Performance in test: Time required to lower temperature from 110° to 46°, about average. Cost of electricity for operation, about average on an adjusted per-cubic-foot basis. Temperature of the frozen food was 6.0°, too high. Time to freeze 2 lb. of ice cubes, 2 hr. 30 min. (1.2 hr. per lb.), longer than average.

Comments: Three of the shelves in the refrigerator were fully and conveniently adjustable; they were pivoted at one side, permitting them to swing out. This feature made the refrigerator section very convenient and easy to use, but reduced the storage space available. Top shelf, however, was too high for persons of short or medium height. Three of the door shelves were also fully adjustable, but none was deep enough to accept ½-gal. milk containers. Flush-type hinges and flush back (no projections at the rear). The swing-out egg drawer has no rack; eggs are piled on top of each other. Refrigerator door opened by a foot pedal (convenient). Freezer is of the drawer type and judged not as convenient to open as the type with a hinged door. As the freezer drawer opened almost fully, the contents of the two wire baskets and the sliding tray holding the ice-cube remover and storage tray were fairly accessible.

This type of design does not permit storage in the freezer door. Mechanical latch of the freezer drawer required a force of 22 lb. to open (too high). The drawer presents more danger to young children than the door on most other freezers as a small child trapped inside, e.g., by action of a child companion, would be unlikely to be able to escape. ¶Current Models BG-15T and BP-15T appear to be essentially the same except that the latter has an ice maker.

B. Intermediate (tentative)

Kelvinator Foodarama, Model K 89M (American Motors Corp., Detroit) \$749. A 2-door model with refrigerator and freezer side by side.

Performance in test: Time to lower temperature from 110° to 46°, shorter than average (desirable). Cost of electricity for operation on an adjusted per-cubic-foot basis, less than average for the frostless type, but to be expected since the freezer temperature was too high. The temperature of frozen food was 11.0° (much too high). Time to freeze 3 lb. 2 oz. of ice cubes, 2 hr. 50 min. (0.9 hr. per lb.), average.

Comments: Side by side design of freezer and refrigerator provides better accessibility of foods than models with freezer at the top or the bottom, but the Foodarama's 40-in. width may make it difficult to fit in many kitchens. Arrangement of refrigerator was very good with provision for storage of large articles. Although the bottom

sliding tray was only 8 in. from the floor, contents were fairly accessible with some stooping. Crisper had transparent door, tightly sealed by a gasket, to retain humidity, and was located at the top of the refrigerator section. Door arrangement was very good. Five fixed-position shelves were easily removable. ½-gal. milk cartons could not be stored in the door unless one of the shelves was removed. Freezer was well arranged. ¶Model K89MAD at about \$800 is essentially the same except that it has an automatic ice maker. Rating does not apply to Model K87M at about \$650 which has the same cabinet and interior arrangement but is not a frostless model (freezer chamber requires manual defrosting).

Leonard L89M (Leonard Appliances, American Motors Corp., Detroit) \$749. Same as Kelvinator Foodarama Model K 89M.

Note: The ratings of Kelvinator and Leonard above are tentative, pending completion of further tests.

Conventional models (with automatic defrost refrigerators, manual defrost freezers)

A. Recommended

Philco Convertible, Model 14RD08 (Philco Corp., Philadelphia) \$450. A 2-door model with freezer at the top.

Table I—Estimated operating costs

A comparison of estimated monthly operation costs. The rate for electricity is assumed to be 3½ cents per kilowatt-hour. Costs of operation with electricity at higher and lower prices per kilowatt-hour can be figured by proportion. Thus for the Amana at 2 cents per kilowatt-hour: $\frac{X}{8.20} = \frac{2}{3.5}$. X is calculated to be \$4.70, the estimated cost of operation per month at 2 cents per kilowatt-hour instead of 3½ cents.

Make and model	List price	Total storage capacity, cu. ft.		Price per cu. ft., \$	Test results			
					Estimated monthly operating cost at 3-1/2¢ per kwhr. at room temperature of		Percent running time	Temperature of frozen food†
		Rated	Actual		80°	90°		
Frostless type								
Amana FOF 125	\$650	16.4	15.5	42	\$6.15	\$8.20	80	-1.5
Coldspot Cat. No. 46-6560	\$430	13.8	11.9	36	\$5.05	\$6.75	71	0.9
Frigidaire FP-142*	\$700	14.2	12.25	57	\$5.75	\$7.65	100	-8.0
General Electric BG-15S†	\$700	14.8	11.3	62	\$4.30	\$5.75	58	+6.0
Kelvinator Foodarama K 89M	\$749	17.6	14.2	53	\$4.65	\$6.20	62	+11.0
Standard type								
General Electric BJ-13T	\$500	13.0	10.7	47	\$3.15	\$4.20	58	+6.0
Norge CB-F14	\$430	13.4	12.1	36	\$3.30	\$4.40	47	+5.0
Philco Convertible 14RD08								
as combination	\$450	13.6	12.2	37	\$3.00	\$4.00	66	-1.0
as refrigerator	\$450	13.6	12.2	37	\$3.45	\$4.60	68	+11.0**

† Current model, BG-15T, appears to be essentially the same.

* Current model, FP1-15B, appears to be essentially the same.

** Satisfactory, as intended only for ice cubes.

‡ At 90° room temperature, with control set to give 39° in the refrigerator section.

Performance in test: Time to lower temperature from 110° to 46°, about average. Cost of electricity for operation on an adjusted per-cubic-foot basis, below average (desirable). Temperature of frozen food was -1.0°. When converted to a refrigerator, at same control setting, air temperature in ice-cube compartment was 11.0° (satis-

factory). Time to freeze 5 lb. of ice cubes, 3 hr. 15 min. (0.65 hr. per lb.), better than average.

Comments: The convertible feature of this model should prove valuable to those who use frozen food only occasionally and frequently have need for extra fresh food storage space. The conversion, which increases the re-

Table II—Physical characteristics

	Amana FOF 125 Free-O-Frost	Coldspot Frostless	GE BJ-13T	Kelvinator Foodarama K 89M
Dimensions				
Total volume (mfr.'s rating), cu. ft.	16.4	13.8	13.0	17.6
Actual usable total volume, cu. ft.	15.5	11.9	10.7	14.2
Total shelf area, sq. ft.	24.5	20.5	18.9	23.6
Height, width, depth, including handles, in.	69½ x 32 x 28	65 x 32 x 26½	64 x 30½ x 26½	63 x 41 x 26½
Flush back	yes	yes	yes	yes
Flush hinges	yes	yes	yes	yes
Freezer section				
Capacity, actual, cu. ft.	3.9	3.9	2.2	4.8
Number of shelves and type	Wire basket; refrigerated shelf. In door: 1 fixed shelf, 4 packaged-food dis- pensers.	1 full-width shelf; 2 ½-width shelves; 1 ¾-width sliding shelf with wire basket. In door: 2 ½-width fixed shelves, plus ice- cube server.	Drawer-type wire bas- ket; shelf for ice-cube trays.	6 fixed shelves. In door: 2 fixed shelves; 2 frozen-juice dis- pensers.
Location	bottom	bottom	bottom	side
Ice-cube trays	2, quick release with server	3, quick release	3, quick release	3, quick release; 1 ice-cube container
Refrigerator section				
Capacity, actual, cu. ft.	11.6	8.0	8.5	9.4
Number of shelves and type, in box	3 wire, sliding; 1 half-width wire, fixed; 1 glass, fixed	1 full-width sliding; 1 full-width plastic, fixed; 1 half-width plastic, fixed; 1 half-width plastic, roll-a-way; 1 half-width sliding bottle tray.	3 wire, sliding; 1 glass, fixed.	2 wire sliding, fixed position; 1 wire sliding, adjust- able; 1 wire fixed, adjustable; 1 sliding wire basket.
Number of shelves and type, in door	1 fixed; 1 ¾-width fixed; 1 ½-width fixed; 1 full-width fruit bin.	1 fixed; 2 fully adjustable.	2 adjustable; 1 fixed.	5 fixed position
Crisper or vegetable drawers	2 porcelain enamel	semicircular revolving, porcelain enamel	2 quarter-circular re- volving, one for meat, one for vegetables, porcelain enamel	Glass fixed position, with extra half shelf and drop-down door
Meat drawer	yes, plastic	yes, with plastic cover	see above	yes, porcelain enamel, covered, sliding.
Butter compartment	yes (heated)	yes (heated)	yes (heated)	yes
Cheese compartment	yes	yes	no	yes
Egg trays and capacity	2 removable in door 24 eggs	loose basket 30 eggs	1 removable in door 12 eggs	loose plastic container 24 eggs
Automatic defrosting				
Freezer	frostless	frostless	no	frostless
Refrigerator	frostless	frostless	yes	frostless

refrigerator space by 2.5 cu. ft. and reduces the freezer space by the same amount, is accomplished merely by operating a switch located at the top of the freezer compartment. With this switch in the "refrigerator" position, cold air from the ice-cube compartment circulated through a number of holes in the dividing wall to cool

the air in the converted space to refrigerator (fresh food) temperature. With the switch in the "freezer" position the entire freezer section is cooled by coils in the walls. Interior of refrigerator was well arranged with provision for storage of large items. The three sliding shelves made the contents fairly accessible. Door storage was adequate but inward bulging of plastic door liner on box tested made it inconvenient to store $\frac{1}{2}$ -gal. containers.

of six 1960 refrigerator-freezers

Norge CB-F14	Philco 14RD68
13.4	13.6
12.1	12.2
20.0	20.4
64 $\frac{1}{2}$ x 31 x 29 $\frac{1}{4}$	68 x 31 $\frac{1}{4}$ x 31
no	no
yes	yes
2.7	3.1 (0.6*)
1 $\frac{3}{4}$ -width sliding wire basket; plastic ice server. In door: 1 $\frac{4}{5}$ -width shelf; 1 frozen-juice dispenser.	2 $\frac{3}{4}$ -width wire shelves; 4 small shelves in ice-cube com- partment. In door: 2 full-width shelves.
bottom	top
2, quick release	3, quick release
9.4	9.1 (11.6*)
2 wire, sliding; 1 wire, fixed; 1 plastic, fixed.	3 wire, sliding; 1 glass, fixed.
2 full-width, fixed; 2 $\frac{3}{4}$ -width, fixed.	2 fixed
2 porcelain enamel	1 full-width porcelain enamel with clear plastic front
no	no
yes	yes
yes	yes
2 removable in door 16 eggs	2 fixed in door 24 eggs
no	no
yes	yes

* When converted to refrigerator.

B. Intermediate

General Electric, Model BJ13T (General Electric Co., Louisville, Ky.) \$500. A 2-door model with drawer-type freezer at the bottom.

Performance in test: Time to lower temperature from 110° to 46° shorter than average (desirable). Cost of electricity for operation on an adjusted per-cubic-foot basis, about average. At 90° room temperature, with control set to give 39° in the refrigerator section, temperature of frozen food, 6.0° (too high). Time to freeze 3 lb. 15 oz. of ice cubes, 4 hr. (1.0 hr. per lb.), average.

Comments: Arrangement of space in refrigerator was judged good and convenient for normal use, with ample room for large items. Crisper vegetable storage judged inadequate for an average family's needs. Door provided adequate and convenient storage except that the shelves were not wide enough to accommodate $\frac{1}{2}$ -gal. milk cartons. Egg tray difficult to remove without spilling eggs. Contents of freezer basket were accessible with a minimum of stooping, but items on shelf were not readily accessible. For other comments on drawer-type freezer, see listing of GE Model BG-15S. ¶ Model BGS13T at \$570 has the same cabinet and interior arrangement but is a frost-free model.

Norge Customatic, Model CB-F14 (Norge Sales Corp., subsidiary of Borg Warner Corp., Chicago 54) \$430. A 2-door type with freezer at the bottom.

Performance in test: Time to lower temperature from 110° to 46°, shorter than average (desirable). Cost of electricity for operation on an adjusted per-cubic-foot basis, about average. Temperature of frozen food was 5.0° (somewhat high). Time to freeze 2 lb. 4 oz. of ice cubes, 2 hr. 15 min. (1 hr. per lb.), about average.

Comments: Refrigerator space well arranged with provision for storage of large items. Door arrangement was satisfactory. Storage of large bottles or cartons was provided for in refrigerator. Sliding wire basket in freezer judged inconvenient to use. Freezer door was opened by a foot pedal.

* * *

Note

In addition to the brands described and rated in this article, the following additional refrigerator-freezers are now undergoing tests and will be reported in forthcoming issues: *Admiral Model 14RF65*, *Frigidaire Model FD-13T*, *Gibson Model G-169F01*, *Hotpoint Model 12EW-12A*, *RCA Whirlpool Model GS-12T*, and *Westinghouse Model REA-13RW1*; also Norge and RCA Whirlpool gas-operated refrigerators.

Comet



SOMEONE has suggested that the *Comet* may be the car for those who cannot decide between a full-size car and the compact models, as represented by *Corvair*, *Falcon*, *Valiant*, *Rambler American*, and *Studebaker Lark*. Actually the interior of the *Comet* is larger than the *Falcon* only in the trunk space, for both cars have the same passenger space dimensions and the same engines. Exteriorly, however, the *Comet* is bigger; it has a $4\frac{1}{2}$ -inch longer wheelbase, is 14 inches longer overall, and is about 115 pounds heavier than the *Falcon*. The *Comet* has dual headlamps while those on the *Falcon* are the older style single headlamps, which in CR's opinion are preferable.

The *Comet* has been very well received, over 28,000 being sold in the first six weeks following its introduction.

Reports that the *Comet* has more pep than the *Falcon* have puzzled some people who know that a heavier car is not likely to have as much accelerating ability as a lighter car that is powered by the same engine.

Actually the *Comet* with its 3.56 to 1 rear axle ratio is snappier in acceleration than the *Falcon* with a 3.1 to 1 ratio, but it is not as quick to accelerate as the *Falcon* now being marketed, with a 3.56 to 1 rear axle ratio.

Headroom on the *Comet* was adequate in the front, but somewhat skimpy in the rear for tall persons, and somewhat more leg room in the rear would also have been desirable. The car had step-down floor design but was relatively easy to enter and leave, and the seats were very comfortable. Driver vision was very good, but a larger rear-view mirror would improve the driver's vision to the rear.

Controls on the panel were well lighted and identified, but indicator lights were used instead of the more desirable oil-pressure gauge and ammeter. Front fenders, like the *Falcon*'s, were bolted on and should be relatively inexpensive to replace, as today's fenders go. *Falcon* front

fenders are about \$7 cheaper than those for the regular-size *Ford*.

Prices

The posted price of the *Comet* 4-door sedan with standard transmission was \$2274.90, itemized as follows:

Manufacturer's suggested list price, \$2053 (only \$79 more than the corresponding *Falcon*); heater and defroster, \$74.30; radio, \$58.80; electric wipers, \$9.65; padded panel and visors, \$22.40; freight, \$56.75.

Riding and handling qualities

The *Comet* was easy to handle and park (turning diameter was about $1\frac{1}{2}$ feet greater than that of the *Falcon*). At speeds up to 60 miles per hour, riding quality was good on hard-surfaced roads in moderately good to good condition. The longer wheelbase of the *Comet* provided a somewhat better ride than that of the *Falcon*, with less

Specifications

	Comet	Ford Falcon
Taxable horsepower	29.4	29.4
Taxable weight, pounds	2432	2315
Engine		
Type	6 cylinders	6 cylinders
	overhead valves	overhead valves
Piston displacement, cubic inches	144	144
Rated maximum horsepower at stated rpm.	90 at 4200	90 at 4200
Compression ratio	8.7 to 1	8.7 to 1
Cooling system capacity with heater, quarts	9.3	9.3
Chassis and body		
Type	Unit	Unit
Wheelbase, inches	114	109.5
Over-all length, inches	195	181
Width, inches	70.0	70.0
Height, inches	54.5	54.5
Tires	6.00 x 13	6.00 x 13
Rear axle ratio	3.56 to 1	3.1 to 1 (3.56 to 1)
Brake area, square inches	114	114
Turning diameter, feet	39.9	38.3
Minimum road clearance, inches	5.9	5.9
Other details		
Battery	12-volt 40-amp.-hr.	12-volt 40-amp.-hr.
Gasoline tank capacity, gallons	14	14
Curb weight, pounds	2540	2425
Trunk space, cubic feet	26.6	23.7

pitching, but the difference was judged to be very slight. Steering was fast, light and easy on sharp turns, and the car cornered well with a minimum of body sway. The heater was judged adequate.

Performance on road tests

For convenient comparison, acceleration figures for the *Comet* and two *Falcons* are shown in the following table:

	Comet 3.56 axle	Falcon 3.1 axle	Falcon 3.56 axle
0 to 60 m.p.h., through gears	21.0	26.5	19.5
20 to 50 m.p.h., high gear	15.0	16.0	13.5
40 to 60 m.p.h., high gear	12.5	17.0	11.0

The acceleration times of the *Comet* were slightly longer (slower) than those of the *Falcon* with the

same rear axle ratio, but adequate for a car for which economy is a major consideration.

It should be noted that the *Falcon* with the 3.56 to 1 axle ratio gave much better acceleration than a *Falcon* with the 3.1 to 1 axle ratio. (There was a decrease of about 13 percent in miles per gallon of gasoline.)

Gasoline mileage under test conditions

At a constant true speed of 50 miles per hour, the *Comet* gave 24 miles per gallon, compared to 27 miles per gallon for the *Falcon* with the same 3.56 to 1 axle ratio, 31 miles per gallon for the *Falcon* with the 3.1 to 1 axle ratio.

Speedometer and odometer errors

At 30 miles per hour, the speedometer was about 4 percent fast; odometer was 2½ percent fast.

Grape-Nuts improves its product

(The beginning of this article is on page 2)

soldiers who had drunk beer adulterated with the chemical). Coumarin is another example; this was a popular flavor ingredient of cocoa and chocolate products and widely used in other foods and in medicines, and as an ingredient of imitation vanilla extract over a period of 75 years. Some years ago, it was determined to be toxic and damaging to the livers of test animals, and use of coumarin in foods was thereafter prohibited. There was also a highly poisonous salt substitute which caused several deaths before its great toxicity was suspected and tracked down.

Very recently the Food and Drug Administration has withdrawn approval of a number of food dyes, which, though long deemed acceptable and harmless, have recently been found to be unsafe, and strongly toxic to human beings, as well as to animals. The fact that the approval was withdrawn when it was found to have been unwarranted is of small comfort to the consumer who might have consumed food containing a toxic dye or flavoring material for many years on the comfortable assumption that his health was being safeguarded by a trained and experienced group of governmental chemical and toxicological experts.

There is no doubt that a number of governmental regulatory bodies do protect consumers from many harmful materials. These agencies serve useful purposes, but it is a great mistake to assume that everything they do not prohibit is necessarily harmless; the wise consumer will so far as possible avoid foods and beverages contain-

ing chemical additives. The fewer such products he takes into his body, the less is the chance that he will consume some that are harmful, though deemed by the regulators at the moment to be almost, or entirely, wholesome and safe.

A clue to the type of situation in the regulatory agencies which may permit rather systematic laxity in favor of chemical additives in foods and beverages is seen in recent news stories about the forced resignation of a highly-placed food and drug official near the top of the salary scale. This scientific expert was revealed to have taken large sums of money from the drug industry through the editorship of commercial drug journals and through receipt of gifts from drug companies over which he had power as a regulatory official. He was even a business partner in one publication and received a percentage of receipts from drug advertisements and reprints used for advertising purposes by drug companies.

It is not to be assumed that the actions of this official and others having similar extramural relationships with industry are occasioned by the fact that officials' salaries are low; it is rather that many government employees and officials seem not to recognize their obligation to remain at arm's length from the industries with whose products or services they are concerned in their daily work as investigators or regulatory officials. (The same charge lies against some university professors who have outside connections that interfere with their objectivity as scholars and

teachers, and their duties to their students.)

It was found that six other men in the department had been serving on the editorial boards of various journals, but were not receiving money compensation for their services.

It is not merely the "sideline" income sources of government experts that are to be criticized; their outside "friendly contacts" with the regulated industries are often open to strong objections. Unduly chummy relationships recently disclosed of top regulatory officials in several departments are under close congressional scrutiny at this time. Even a trade paper has commented upon hints that food and drug officials are too "soft" in their dealings with regulated industry and work too closely with those whose products should be dealt with objectively, and subject to constant vigilance, criticism, and correction.

There were some changes made

Valuable results seem to have followed our comments on the strange additives used to preserve a popular breakfast cereal, and our readers' indignant and well expressed criticisms of the "modern improvements" in an old and well-liked breakfast food. The package of *Grape-Nuts* illustrated in our February 1960 BULLETIN contained 10 ingredients; two of them are preservatives (butylated hydroxyanisole and butylated hydroxytoluene) and others are emulsifiers needed to disperse the preservatives effectively throughout the product. These substances now seem to have become somewhat less than indispensable. When consumers expressed a strong distaste for them, radical changes were made in the ingredients, and on packages of *Grape-Nuts* bought recently, the preservatives and emulsifiers are no longer listed, but only the following six ingredients:

WHEAT, MALTED BARLEY, SALT,
YEAST, NIACIN, VITAMIN B₁.

Niacin and B₁ are both vitamins; these are present in satisfactory amounts in wheat flour, both whole wheat and general-use enriched flour, but low in breakfast foods made of wheat. Niacin and thiamine (B₁) are commonly added to cereals to bring these vitamins up to levels that experts consider to be appropriate.

Recently published tables of food composition indicate that a considerable number of breakfast foods have added thiamine or added niacin, or both, presumably present as means of overcoming deficiencies produced in the factory-processing of cereals. Niacin and thiamine are two of the vitamins that are added to produce what is erroneously termed "enriched bread," a type of bread now required by law to be made and distributed in

more than half of the states of the Union. Their addition, therefore, to a breakfast food, while perhaps objectionable in the sense that it would be better to eat foods that were *naturally* well balanced nutritionally, is certainly not open to the serious objection that could be raised to the addition of substances such as butylated hydroxyanisole.

Thiamine (vitamin B₁) in the diet is particularly important where the carbohydrate (starch and sugar) and fat intake are high. Lean meat and poultry and whole grain and "enriched" cereal products contain substantial amounts of niacin; corn and rice are low in this vitamin, and oatmeal is likewise low. (Vitamin deficiencies have been an important cause of serious illness in regions where corn meal forms a substantial part of the diet.)

Another food product with unfamiliar additives

The makers of *Sun-Maid Raisins* could improve their formula to advantage. There was a time when anyone buying raisins expected to get just plain raisins. A package of *Sun-Maid* brand raisins purchased some months ago showed that the raisins had been treated with artificially flavored raisin seed oil and contained propyl gallate, butylated hydroxyanisole, butylated hydroxytoluene, propylene glycol and citric acid added as preservatives.

There are a good many who would suppose it might be better to let raisins gradually deteriorate on the shelf (as all good fresh foods not chemically preserved will do) than to save them for a longer life by additions of unfamiliar preservative ingredients. Perhaps the *Sun-Maid* people may wish to give some consideration to this problem in the packaging of raisins for the grocery trade; it would seem that their product may need the same sort of revision as did *Post Grape-Nuts*. The headquarters of the *Sun-Maid Raisin Growers* of California is at Fresno, California.

Emendation to Consumer Bulletin

Dinnerware

Page 39, June '60 Bulletin

Through an error of the shop preparing the plate for the cover, the dinnerware shown in the illustration was not identified. It is *Syracuse Casual Carefree China* and the pattern is *Blue Mist*, which was the one tested. The photograph was supplied by the manufacturer of the dinnerware.



Hedge trimmers

TRIMMING HEDGES and shrubbery with a pair of hand-operated hedge shears is a tiresome and time-consuming task. Electric-motor-operated trimmers make light work of the hedge-trimming chore. Even a novice, with a little practice, can turn out a well-trimmed hedge in a fraction of the time—and likewise a fraction of the muscle-weariness—required for hand trimming. There is a certain amount of hazard in using a hedge trimmer, as there is with nearly all power tools, but there is a greater hazard with hedge trimmers than some other tools, because there is no way in which the cutting blades can be guarded and at the same time be free to do their work effectively.

All the models tested but two had on-off switches of the toggle type. The exceptions were the *Craftsman*, which was a push-button type, and the *Black & Decker*, which had the preferred type of switch that must be held down to stay in the "on" position. When such a switch is released, as would happen, for example, if the operator slipped and fell, the motor stops quickly and the blades no longer present a great hazard.

Electrical safety

Electrically-powered tools or devices which are used outdoors should always be grounded for safety. To provide for the necessary grounding, some manufacturers use a three-wire power cord fitted with a special three-prong plug and a matching adapter with pigtail wire fitting a standard two-slot household receptacle. *It is strongly urged that, instead of using an adapter for any electrical tool with a three-prong plug, a special three-opening receptacle designed for use with this type of plug be installed.* Installation should be carried out by a competent electrician who should be instructed to make certain that there is a good and permanent ground connection from the box to the permanent ground of the house. If the adapter is used, its

loose wire must be connected securely to an electrical ground, which may be a screw on the cover plate of the receptacle box if it is known with certainty that the box is properly grounded. Unfortunately, the design of the adapters supplied with the hedge trimmers left much to be desired. The adapter itself could introduce a serious shock hazard if the pigtail wire for connection to the receptacle box should not be securely fastened and came loose or if the operator failed to connect this wire to the cover plate. If the latter mistake occurred, the short grounding wire itself could touch one of the prongs of the adapter and make the housing of the tool live, introducing a most serious shock hazard. Because the hedge trimmer manufacturers supply only a short cord with their machines, and hedges are often long and some distance away from the nearest power outlet, it is necessary to use an extension cord. This must be of the three-wire type, else the safety value intended to be afforded by the three-prong plug is lost. Some of the hedge trimmers tested were fitted with two-conductor cords with no provision for grounding. No appliance with a two-conductor cord should ever be used out of doors—the hazard is much too great.

All extension cables should be inspected frequently and, if in damaged or poor condition, should be replaced immediately. Any defective wiring out of doors involves hazard of shock of an especially dangerous sort which may cost a life. The danger is particularly great when the ground is wet or damp. The careful homeowner will prefer to wear rubbers or galoshes and dry leather gloves when doing a hedge trimming job. Such precautions are specially necessary with two-wire ungrounded trimmers, but are advisable with any electrical appliance used out of doors. There can be no assurance that an appliance which is safe at one time may not develop an electrical

hazard at another, without warning; besides, accidents sometimes occur by which the wire itself is cut, in which case there is extreme danger of shock.

Three-wire extension cords should be fitted with molded-on unbreakable plugs and connectors permanently attached to the wire to prevent all possibility of a mistake in wiring which might take place later if someone not familiar with the electrical principles involved should attempt a repair. (Sears Roebuck offers a 16-gauge three-wire rubber-covered extension cord, 50 feet long, for \$5.85, plus postage, Cat. No. 34-5877.)

If the user of a hedge trimmer decides to make up a three-wire extension cord himself from three-wire rubber-covered cord, he must use the greatest care in wiring both the plug (cap) and the connector to be sure that he does not connect the ground lead (usually the green colored lead) to the terminal which itself is connected to the live side of the line. If he should make this mistake, the frame of the hedge trimmer would be live—and very dangerous—at 120 volts, and the three-wire extension cord instead of being a safeguard would become a source of an extreme danger, very possibly death to the user. The same problem arises in repairing or replacing a plug on the regular three-wire power cord; a mistake, which even an experienced electrician might make in some cases, could have fatal results.

Flexible wire of 16 gauge can be used for extensions up to 200 feet, and 14-gauge wire is satisfactory up to 300 feet for appliances using up to

two amperes. (The use of too light an extension cord is not only hazardous; it lowers the efficiency of an appliance and may cause it to be damaged in use.)

The cutters of the hedge clippers should be cleaned and oiled after each use. Occasional replacement of gear box lubricant may be needed. Universal (ac-dc) motors will require new brushes from time to time. All of the clippers tested but one, the *Trimmer Boy*, had universal motors. It is very important to read and follow carefully the manufacturer's maintenance instructions. If a parts list is supplied, preserve it; you may very likely need it later on. In the listings, cycles refers to number of strokes of cutting blade per minute.

A. Recommended

Black & Decker, Model U-450 (The Black & Decker Mfg. Co., Towson 4, Md.) \$29.95. Weight, 5 lb. 4 oz. 12-in. blade. A-c motor rated at 1.5 amp. 1500 cycles per min. Had 3-wire cord, about 20 in. long, with grounding plug (desirable). Top handle reversible. The hedge trimmer is well balanced. Conveniently located switch can be held in "on" position for operation. When the switch is released, the motor stops (desirable). Switch can also be locked in "on" position; when this is done, the partial safeguard mentioned is not provided. The U-450 was worse than average in noise and vibration. Cutting ability, satisfactory. UL and CSA (the Canadian counterpart of Underwriters' Laboratories) labels. **2**

Trimmer Boy, Model 1360B (Portable Electric Tools, Inc., Chicago) \$29.98. Weight, 5 lb. 1 oz. 12-in. blade. A-c motor rated at 1.6 amp. 850 cycles per min. Had 3-wire cord, about 10 in. long, with grounding plug (desirable). Switch, not marked on-off, conveniently located. The hedge trimmer is well balanced. Was relatively noisy in operation, with some vibration. Cutting ability, satisfactory. UL label. **2**

Disston Dragon, Model D-99 (H. K. Porter Co., Inc., Philadelphia 35) \$44.50. Weight, 5 lb. 13-in. blade. Ac-dc motor rated at 2.3 amp. 900 cycles per min. Toggle switch, marked on-off, conveniently located. Three-wire cord, about 10 in. long, with grounding plug and adapter. Balance, very good. Somewhat noisy. Cutting ability, satisfactory. UL label. **3**



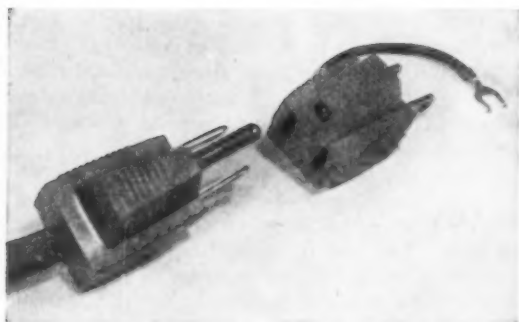
The cutting head on this Hedgemaster 12 can be swiveled through 90 degrees. This, however, must be done with care to avoid cutting oneself, even when the trimmer is unplugged.



Trimmer Boy 1360B



Disston Dragon D-99



The new three-prong plugs and adapters are made of soft, unbreakable plastic; this is a good design.

Hedge-shear, Model 103R (Porter-Cable Machine Co., Syracuse 8) \$59.95. Weight, about 6 lb. Ac-dc motor rated at 2.5 amp. 3-wire cord, 10 ft. long (desirable). Action like that of a chain saw with a chain-type blade running in one direction instead of back and forth. This design provided two cutting surfaces each about 14 in. long, permitting machine to cut in either direction, as desired. Cutting ability, very good. **3**

Little Wonder, Model 16 (Little Wonder Inc., Div. of Schiller-Pfeiffer, Inc., Southampton, Pa.) \$59.50. Weight, about 5¼ lb. 15-in. blades. Universal (ac-dc) motor rated at 1.2 amp. In this trimmer and the *Hedge-master*, both blades oscillated. Had 3-wire cord, 5¼ ft. long, with grounding plug. Metal toggle switch conveniently located near rear handle for easy access. Well balanced. Very little vibration. Cutting ability was very good. Lubrication instructions on tag. *UL* and *CSA* labels. **3**

B. Intermediate

Craftsman (Sears-Roebuck's Cat. No. 9-8589) \$19.88, plus postage. Weight, 4 lb. 13 oz. 12-in. blade. Ac-dc motor rated at 2.0 amp. 800 cycles per min. Unmarked push-button on-off switch, located under the handle. and somewhat unhandy to operate. Had 3-wire cord, 15 in. long, with grounding plug and adapter. Reversible side handle. Well balanced. Was relatively noisy and had above-average vibration. Cutting ability, only fair on new growth of hedge and tended to slow down on older heavier growth. Did not cut as cleanly as some of the other makes tested. *CSA* label. **1**

Skil, Model 513 (Skil Corp., Chicago 30) \$39.95. Weight, 4 lb. 11 oz. 13-in. blade. Ac-dc motor rated

at 2.3 amp. 950 cycles per min. Had 2-wire cord, about 4 in. long, with no provision for grounding (undesirable). Switch, marked on-off, conveniently located. Well balanced. Was relatively noisy and had above-average vibration. Cutting ability, satisfactory. *UL* and *CSA* labels. **2**

Hedgemaster, Model 12 (Kaufman Mfg. Co., Manitowoc, Wis.) \$44.50. Weight, 5 lb. 11 oz. 12-in. blades. Adjustable (2-position) cutting head. Ac-dc motor rated at 1.2 amp. 650 cycles per min. On this trimmer and the *Little Wonder*, both blades oscillated. Two-wire cord, 33 in. long, with switch in cord (not conveniently located). Lacked provision for grounding (undesirable). Well balanced. Was very quiet in operation, and had little vibration. Cutting ability, very good on both new and old growth. With 3-wire cord, would warrant an *A-Recommended* rating. **3**

Sunbeam, Model A-1-A (Sunbeam Corp., Chicago) \$49.95. Weight, about 4½ lb. 12-in. blade. Ac-dc motor rated at 0.6 amp. Body and housing of plastic and light-metal alloy. Had a slip clutch to prevent damage to gears or blade if cutter bar strikes a wire or other foreign object. Had 9-ft. 2-wire cord with no provision for grounding. Cord of bright red color was easy to see, and this reduced the likelihood of accidental cutting of the cord. Sliding on and off switch conveniently located on motor housing. Very well balanced. Had considerable vibration. Cutting ability, satisfactory on new growth of hedge, but on heavier old growth was considered to be underpowered. **3**

Hedge trimming attachments

A. Recommended

Skil, Model 22504 (Skil Corp.) \$19.95. Fits all *Skil* ¼-in. drills; also certain *Black & Decker* models. Drill was easy to attach and remove. Well balanced. Very little vibration. Weight with *Black & Decker U-1* drill, 6 lb. 6 oz. Cutting ability, good. Recommended only when used with drill having 3-wire cord. **1**

B. Intermediate

Black & Decker U-1014 (The Black & Decker Mfg. Co.) \$19.95. Weight, 2 lb. 14 oz. 12-in. blade. Fits *Black & Decker Models U-1, U-3, and U-50* ¼-in. drills. Drill was easy to attach and remove, but not as good a fit as with *Skil* attachment. Well balanced, but considerable vibration. Weight with *U-1* drill, 5 lb. 15 oz. Cutting ability, only fair. Somewhat awkward and tiring to operate. **1**



Black & Decker U-450



Skil trimmer attachment 22504



One of the "cabin pictures" from The Seagoer Publishing Co.

Bargains from abroad

ONE of the joys of taking a trip is buying unusual items, or bargains, which can be brought back and displayed as souvenirs or mementos of the happy journey. Many people are not aware that it is also possible to get items from abroad by mail order, not quite so easily as they could buy something from Sears, perhaps, but with no great difficulty either.

In CONSUMER BULLETIN, June 1959, the article "Bargains from Europe" caused a great deal of comment among our readers and aroused considerable interest in the subject of buying abroad, judging from the surprisingly large volume of correspondence from readers of the BULLETIN.

Since that time, Consumers' Research has received information about several other sources for foreign merchandise, not only from Europe but from the Far East as well.

During the past year, Hong Kong has become widely known as a tourist attraction. Hong Kong is a free port and, according to all reports, many things are sold at fractions of their prices in the United States. It is said that in its 35 square miles there are so many shops and tailors that the visiting tourist is almost exhausted by the be-

wildering variety of choices available to him. Almost everything in the way of consumer goods can be obtained there, but Americans are more likely to purchase clothing, including dresses and sweaters, men's suits, custom-made shoes, and furniture, jewelry, and perfume.

Even if you never get to Hong Kong, however, you can secure some of the bargains by buying directly from some shops which do a mail-order business. Lee Kee in Hong Kong, for example, supplies a price list and samples of leather for shoes, which cost the American purchaser something like \$10, including postage, duty free. These shoes, checked by Consumers' Research, not only were made to fit comfortably the feet in the outline sketch we supplied, but were of decidedly good quality material and workmanship. A letter of inquiry will bring an order form and a folder containing samples of leather from which the prospective customer may select the one he likes. These samples include seven colors in Scotch grain, three in West German Cordovan, four in shell Cordovan, one suede, three West German calfskin, one Patent leather, four kangaroo skin, one buckskin, and three alligator skin. The price of the shoes depends in part on the style, and in part on the leather; alligator skin shoes, for example, are \$28, and boots will cost as much as \$22 in shell Cordovan. On his order sheet, Mr. Kee asks that the buyer send pictures found in any magazine or catalog for style.

Two men, who bought shoes by this mail-order process for Consumers' Research, were well satisfied. One, accustomed to buying American shoes priced at about \$25 to \$30 per pair, found the Hong Kong shoes of good quality, made of good materials, and a comfortable fit. The other, accustomed to buying English-made shoes, was similarly well satisfied. We would point out, however, that experts advise that mail-order buying of shoes is risky, for fit may not be good. On the other hand, there are some who may have been successful in buying shoes by mail; such persons would very likely find the Hong Kong source entirely dependable.

The woman who wishes to have something unusual, direct from Hong Kong, may get in touch with Hong Kong Handicraft Enterprise of 4 Prat Avenue, of Kowloon, Hong Kong, which specializes in making "all kinds of ladies' wear, woolen dresses, and sweaters, silk dresses, beaded bags, children's dresses, all hand made." Ladies' woolen knitted sweaters cost the mail-order buyer \$14.50, including the postage.

Consumers' Research ordered a woolen knit sweater and received a green bulky pattern knit cardigan, with crocheted buttons. The sweater

was full fashioned and had all the necessary elements of fit to make it look well. The neck lay smooth and flat; the shoulder seams were well placed; the sleeves were of ample width, especially through the upper arms, and had a slight ease; the rib knit on the sleeves and the lower edge of the sweater was elastic, and the body of the sweater had a slight fullness; the buttons and buttonholes were correctly matched in size and were so placed that the front openings stayed neatly closed. The line around the lower edge of the cardigan sweater was even. It appeared to be a good buy at \$14.50, and was similar in style, fiber, and knit pattern to a sweater selling at \$35 in a Fifth Avenue shop in New York City. Bulky knit sweaters of similar pattern from Hong Kong in all wool that look very much like the sweater sent an individual buyer from Hong Kong were also available in New York City stores, at a lower price (\$12). These sweaters, however, did not seem to have as much "give" to them, and the wool had a rather harsh feel.



Rosenthal "Maria Weiss"

Turning to Europe, it is sometimes possible to buy dinnerware from a European distributor in patterns that are not available in your American city. Total cost will likely be reasonable, despite the duty which must be paid. Dinnerware is available at a relatively reasonable price from Phil. Jost, Bacharach-Rhein, Germany. A letter addressed to them will bring a prompt reply, along with many circulars of patterns which are available in Heinrich, Hutschenreuther, and Rosenthal "porzellans," porcelain dinnerware. A 22-piece service in some Heinrich patterns is available at 81.80 West German Marks (4 German

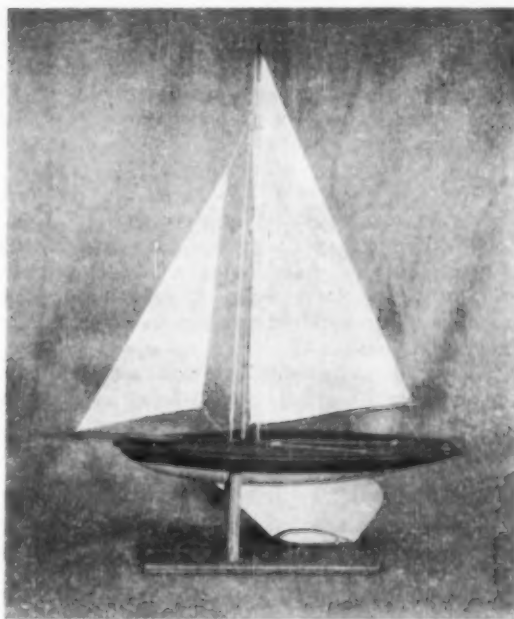
Marks equals \$1 American, approximately). A 22-piece setting includes:

- 6 dinnerplates
- 6 soup plates
- 6 salad plates
- 1 casserole
- 1 open vegetable bowl
- 1 sauceboat
- 1 meat platter

22 pieces

Note that the German company counts the casserole as one piece, and that cups and saucers are not included in such a service. Cups and saucers may be purchased separately at approximately \$1 per cup and saucer, or a coffee service of 15 pieces, which includes a coffeepot, sugar and creamer, and six cups and saucers, can be purchased for about 55 German Marks (\$14). Prices, of course, differ from pattern to pattern, and Rosenthal is more costly than Heinrich. Heinrich dinnerware is German porcelainware, which is delicate and fragile, but makes a beautiful table setting (see the article on dinnerware in CONSUMER BULLETIN for June 1960).

Children in the family (and even the adults) who have access to a pond (or even a swimming pool) should get a great deal of pleasure from the model sailing yachts which are made by the Clyde Model Dockyard Ltd., Glasgow, Scotland. The



The 21-inch model sailing yacht from the Clyde Model Dockyard, Ltd. The stand shown is not included.

Dockyard sells its model yachts in different sizes at the prices shown (which do not include postage):

16-inch	18-inch	21-inch	27-inch
35/6d.	45/6d.	75/—	£5:17:6

Packing and postage charges

15/—	15/—	25/—	30/—
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At the present rate of exchange, it would take about \$11 to send 75 shillings to Scotland, and postage charges would run about \$3.50, or a total of less than \$15 for a 21-inch boat. Similar boats at the toy show in New York City were priced at \$20 to \$25.

Still in a nautical vein, "cabin pictures" of boats under full sail, or photographs of old-time sailing boats, are available from the Seagoer, an illustrated quarterly magazine of London. The quality of these prints might not please the camera or photographic fancier, but sailing boat buffs, as well as others, would likely find them decorative. Prices are \$3.50 for a 12 x 15 print.

Coming back to clothing, doeskin gloves can be ordered by mail from A. S. Cooper, in Hamilton, Bermuda, at \$2.95. These gloves are washable.

The following retailers have been found to be prompt and reliable in filling American mail

orders; it should be borne in mind, however, that any order sent by regular mail may take as long as four to five weeks in transit. Surface mail to and from Hong Kong seems to be exceptionally slow; sometimes it takes as long as five weeks for mail to go in one direction alone.

Men's shoes

Lee Kee Boot & Shoe Maker, 4 Peking Rd., Kowloon, Hong Kong. This firm has also made nurses' white shoes.

Clothing, women's dresses and sweaters

Hong Kong Handicraft Enterprise, 4 Prat. Avenue, Kowloon, Hong Kong.

China

Phil. Jost, Bacharach-Rhein, Box 88, West Germany.

Model yachts

Clyde Model Dockyard Ltd., Argyll Arcade, Glasgow, Scotland.

Cabin pictures

The Seagoer Publishing Co., Ltd., 59 Weymouth St., London, W. 1, England.

Gloves

A. S. Cooper & Sons, Ltd., Hamilton, Bermuda.

Safety rules for homeowners with back yard pools

THE National Safety Council, 425 N. Michigan Ave., Chicago 11, Illinois, points out in its Home Safety Review, Spring 1960, that the risk of someone's being drowned in a private pool is great unless pool owners set up and enforce all of the following rules:

Small wading pools

Constantly supervise youngsters who are using small "kiddie pools." It has been proved that sporadic spot checks on how the children are getting along are not enough. It takes only a few seconds for an incident to occur in which a child may be drowned.

Always empty small plastic pools when children have finished playing. Don't leave even a few inches of water for wandering neighbors' children to get into.

Built-in pools

Build the pool near enough to the house so you can easily keep an eye on swimmers, and on strangers who may wander into the area.

A fence around the pool or pool area is a must.

Mark off shallow and deep sections of the pool with buoy lines or other clear dividers.

Always have a rescue device, such as a ring-shaped life buoy, ready for emergencies. A shepherd's crook—a long pole with body-size hook—is good for encircling and pulling in a floundering swimmer.

Keep the pool clean by using chlorine and other proper chemicals in the water, flushing the pool every week and vacuum cleaning the pool floor with a special underwater cleaner.

You may also want the extra safeguards of a pool cover and an alarm that warns you if someone enters or falls into the pool when it is not supposed to be in use.

Never let anyone, child or adult, swim alone or without supervision.

Be sure someone in the family has had a life-saving course and knows first aid procedures, especially the approved methods for artificial respiration. Keep a first aid kit handy.

Rule out dangerous play, such as running around the pool, pushing, ducking.

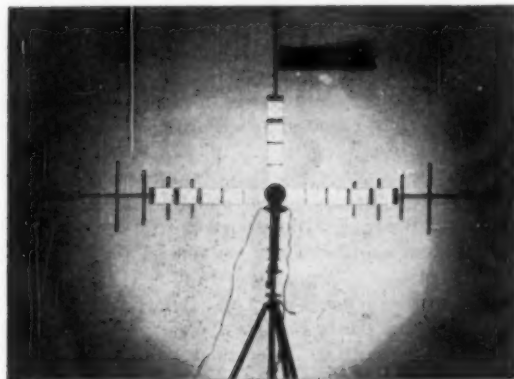
Don't allow hazardous objects, such as bottles and cutlery, to be brought into or used in the pool area.

Sit down with your family and draw up and explain safety rules for the pool's use.

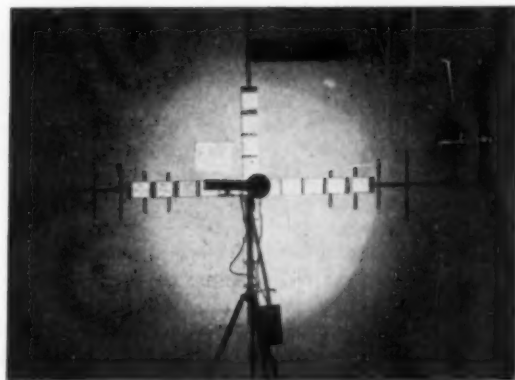
Portable electronic flash units

THE DEVELOPMENT of the transistor and the new miniaturization techniques of the electronic industry have been put to good use in the design of the new portable electronic flash guns. Not too many years ago, the electronic flash or "strobe" unit was a bulky and heavy accessory and therefore unwieldy for the amateur photographer to carry and use. The "strobe" units were expensive to buy, and battery costs were high. By contrast, the six flash units discussed in the present article were all reasonably light, relatively inexpensive, and compact, and batteries were relatively low in price.

To those accustomed to purchasing expendable flash bulbs and getting one flash only, out of a



The Futuramic Strobosonar gave a flash coverage of about 70 degrees as shown in the picture above. The FR-150 covered about 55 degrees, as shown in the picture below. (The vertical strips are 5 degrees apart, giving a range of from 20 degrees to 35 degrees each side of the center.) A normal 45 mm.-focal-length lens covers 52 degrees, and a 35 mm.-focal-length wide-angle lens covers 63 degrees overall.



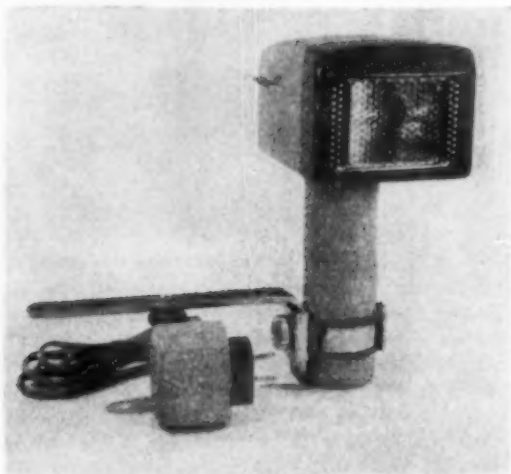
Futuramic Strobosonar 64B

14-cent bulb, the prospect of a bulb that can be flashed over 10,000 times is very attractive. All electronic flash units operate basically in the same way. A large condenser or capacitor is charged to a high voltage over a comparatively long period of time (10 seconds or so) and, at the precise moment determined by the synchronizing contacts in the camera's shutter, the stored energy is discharged through a gas-filled tube in a very short time (nominally 1/1000 second). The resultant "arc" in the tube produces a brilliant light. Modern flash tubes can be flashed over 10,000 times before they lose their effective brightness. The various flash units differ in the method of producing the high voltage supplied to the capacitor, in the size of the capacitor, and in the design of the reflector that directs the light of the flash to illuminate the subject.

The combination of capacitor size and supply voltage determines the intensity of the flash and its duration or "speed." Many methods have been used to obtain the high voltage to charge the capacitor. One of the simplest and least expensive is a transformer-rectifier which connects to the house power lines, and changes an alternating current voltage to d.c. at high voltage (about 500 volts). This method has the disadvantage of limiting free movement of the photographer and is used mainly in studio work where lack of mobility for the lamp is not important.

A dry battery that provides a high voltage (240 to 510 volts) also makes for a simple power unit, but for the amateur it is expensive, for the batteries cost upwards of \$15 and have a shelf-life of only about a year. Even if the ultimate capacity of around 1000 flashes is not used in one year, the battery must still be replaced.

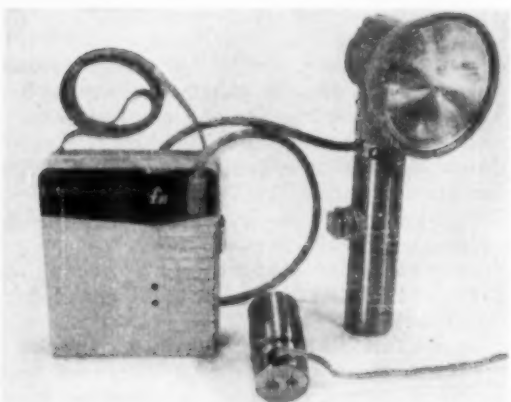
A third method of obtaining the needed high voltage is the vibrator power supply with step-up transformer which changes direct current at low voltage (4-6 volts) from a battery to high-voltage alternating current. This alternating current is then rectified and the resulting d.c. used to charge the condenser. Early vibrator units used lead-acid storage batteries, but they were too heavy and there was always the danger of damage to the



Metz Mecablitz 103



Multiblitz Color SL



FR-150

equipment from spillage of the liquid acid electrolyte. Some new units use the rechargeable nickel-cadmium battery, but batteries of this type are relatively expensive.

The lowest-cost battery for use by the amateur who takes a relatively small number of flash pictures is the ordinary "D"-size photoflash battery. These batteries are inexpensive and easily obtained almost anywhere. (Where they are not available, ordinary flashlight batteries of the same size may be used, with a reduction in number of flashes per set.) Although "D"-cell power supplies do not supply as many flashes per set of batteries as the high-voltage dry-cells, the other advantages of low cost and almost universal availability make "D" cells ideal for amateur use.

Some new electronic flash guns imported from West Germany use a new rechargeable storage battery having a non-liquid electrolyte that is both light in weight and small in size. This kind of battery can be recharged 40 or 50 times before replacement is required; it has the disadvantage of providing relatively few flashes per charge. Of course, for the person who will never take more than 30 to 40 flash pictures on one picture-taking excursion, and that undoubtedly will apply to a great majority of amateur photographers, the limitation to 30 or 40 flash photos will present no great disadvantage.

The newest electronic flash units use transistors to convert a low battery voltage (4 to 6 volts) to high voltage. Transistors are very much more efficient in the use of electric current and therefore require much less electrical energy for operation than do vibrators. Moreover, they permit very compact designs and, through their use, the compact and convenient one-piece electronic flash unit has become a reality. Some of the new vibrator and transistor power packs use auxiliary transistor circuits to turn off the vibrator or transistor converter once the condenser is charged and thereby eliminate waste of battery power between flashes.

One of the greatest advantages of an electronic flash unit is in its use with color film. The color temperature of the flash is almost directly equivalent to daylight. Thus daylight color films can be used for all flash shots, as well as for pictures outdoors. (Nearly all daylight color films are faster outdoors than the corresponding films with Type F emulsions.)

Electronic flash is of very short duration (nominally 1/1000 second, actually about 1/700 to 1/2000 second). Since the brightness of the flash comes to its peak value almost instantly, electronic flash guns must be used with shutters that have zero-delay synchronizers (called X sync). In effect, this will be "open flash," and

as long as the shutter speed is slower than the duration of the flash, the setting of the shutter will have little effect on the exposure. It is recommended that, in situations where there is high ambient light, the shutter be set at a fast speed (not slower than 1/100 second) so that the major part of the light exposing the film will be from the flash. (With electronic flash, focal plane shutters can be used only at about 1/50 second.)

All of the flash units tested had neon indicator lights which came on to signify that the gun was ready to fire. Operating characteristics given in the listings are measured values unless otherwise stated. All of the flash units were judged well made and finished.

Prices given are list, but discounts are generally available on electronic flash units, as on most photographic equipment.

The following listings are in alphabetical order within the A and B rating groups.

A. Recommended

FR-150 (F. R. Corp., 951 Brook Ave., New York 51) \$49.95. Mounting bracket, \$2.98; battery rejuvenator, \$5.95.

A 2-piece unit for use on battery or a.c. Uses 4 "D"-size photoflash batteries or special "D"-size FR batteries, which can be rejuvenated for additional use; the batteries are carried in the separate power pack. Transistorized power supply. On-off switch on power pack. Recycle time, about 8 sec. with fresh batteries, about 30 sec. after 100 flashes. 145 flashes per set of batteries. Duration of flash, 1/1000 sec. (rated). Light output, Kodachrome Guide No. 30. (The Guide number is divided by the lamp-to-subject distance to determine the correct *f* stop opening. A high number is desirable. By comparison, the Kodachrome Guide number for a No. 5B flash bulb at 1/100 sec. is 50.) Angle of coverage, 55° (a 45 mm. focal length lens on a 35 mm. camera covers a field of 52°).

Total weight, 3 lb. Batteries are easily replaced. A

good flash gun which has a fairly light flash head (17 oz.) due to its 2-piece construction. Flash reflector could be swiveled and tilted for bounce lighting.

Futuramic Strobonar, Model 64B (Heiland Photo Products, Div. of Minneapolis Honeywell, Denver, Colo.) \$59.95, including a-c line cord. Quick-release clamp, \$3.95; universal mounting bracket, \$3.75.

One-piece unit for battery or a-c operation. Three size "D" photoflash batteries are carried in the tubular handle. Exposure guide on back of flash head. Transistorized power supply. Batt-off, a-c switch on flash head. Recycle time, about 10 sec. with fresh batteries, about 30 sec. after 100 flashes. 200 flashes per set of photoflash batteries. Duration of flash, 1/2000 sec. (rated). Light output, Kodachrome Guide No. 36 (good). Angle of coverage, 70°.

Total weight, 2 lb. 15 oz. Batteries were easily replaced. A well-designed flash gun which uses a readily available standard type of battery.

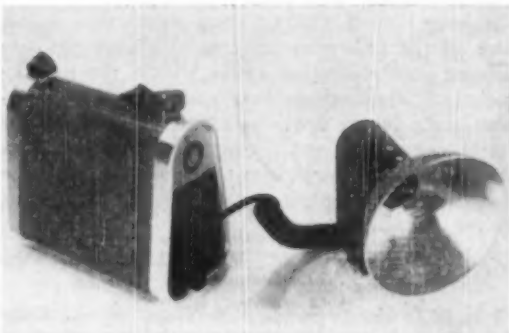
Metz Mecablitz 103 (Distributed by Burleigh Brooks, Inc., 420 Grand Ave., Englewood, N.J.; made in West



Ultrablitz Monojet



Batteries are installed in different ways in the various flash guns. The "dryfit" battery fits into the head of the Metz Mecablitz 103 at the left. Four FR "D" cells fit into the power pack of the FR-150 in the center, and 3 "D" cells fit into the handle of the Futuramic Strobonar 64B at the right.



Strobomite

Germany) \$59.95, including neck strap, sync cord, bracket, and battery charger.

One-piece unit, for use with battery only. Special 6-volt dry-paste lead-acid storage battery (replacement cost, \$4.50) carried in "head" of flash gun. Exposure guide cards fit on back of flash head. Transistorized power supply with monitor circuit (see text). On-off switch and "open-flash" button on head. Recycle time, about 8 sec. with a fully charged battery, about 12 sec. after 50 flashes. 85 flashes per charge. Duration of flash, 1/1000 sec. (rated). Light output, Kodachrome Guide No. 36 (good). Angle of coverage, 65°.

Total weight, 2 lb. 6 oz. Battery, which was said to be good for 40 to 50 recharges, was fairly easily replaced. A well-designed flash gun with adequate light output and short recycle time. This flash gun is judged to be a good choice for the majority of casual amateurs.

Ultrablitz Monojet (Imported by Allied Impex Corp., New York 10; made in West Germany) \$69.95. A-c line cord, \$1.25; universal bracket, \$2.25.

One-piece unit for use with battery or a-c. Uses sealed-in nickel-cadmium battery. Has a built-in charger. Can be used on a-c while battery is being charged. Vibrator power supply with transistor monitor circuit. On-off a-c switch on flash head. Recycle time, 12 sec. with fully charged battery, 30 sec. after 40 flashes. 50 flashes per charge. Battery was said to be good for 400 to 500 recharges. Duration of flash, 1/2000 sec. (rated). Light output, Kodachrome Guide No. 28 (fairly good). Angle of coverage, 60°.

Total weight, 2 lb. (lightest of the one-piece flash guns tested). A satisfactory flash gun, but afforded relatively few flashes per charge.

B. Intermediate

Multiblitz Color SL (Distributed by Intercontinental

Marketing Corp., Long Island City 1, N.Y.; made in West Germany) \$59.95. Charger, \$5.95.

Two-piece unit with permanently attached connecting cord; for battery use only. Special "dryfit" 4-volt rechargeable dry-paste lead-acid storage battery in power pack. Had vibrator power supply with transistor monitor circuit. On-off switch and "open-flash" button on flash head. Recycle time, 10 sec. with a freshly charged battery, about 20 sec. after 30 flashes. 35 flashes per battery charge (judged low). Duration of flash, 1/800 sec. (rated). Light output, Kodachrome Guide No. 36 (good). Angle of coverage, 50°. 4-in. reflector adjustable to 75°, but with 1/2 to 1 stop less light at the larger angle.

Total weight, 2 1/2 lb.; head alone, 10 oz. Battery, which is good for about 40 to 50 recharges, was relatively difficult to replace. An electronic flash unit with many desirable features, but lacked means for a-c operation; and the fact that only 35 flashes were obtained from one charge made the *Multiblitz* less desirable than the *A-Recommended* flash units.

Strobomite (Graflex Inc., Rochester 3, N.Y.) \$64.95.

A 2-piece flash unit for use on battery or a-c power. Uses 4 "D"-size photoflash batteries carried in the power pack. Vibrator power supply. On-off switch on power pack. Open-flash button on flash head. Recycle time, 10 sec. with fresh batteries, over 20 sec. after 90 flashes. 160 flashes per set of batteries. Flash duration, 1/1100 sec. (rated). Light output, Kodachrome Guide No. 30 (fairly good). Angle of coverage, variable from 48° to 55°, by adjusting reflector.

Total weight, 4 lb.; head only, 8 oz. (very light). Batteries fairly easily replaced. The *Strobomite* had the undesirable characteristic of having the ready light come on before the gun could be flashed (as much as 10 sec. in some instances).

Concluding test findings on the new outboard motors

(The beginning of this article is on page 39)

the June 1960 BULLETIN, there were detailed listings of the following motors, which are now arranged in alphabetical order within the quality ratings. The ratings were based upon information given in the previous article referred to and on the results of the performance tests (see the tabulation) all of which were completed but some not in time to permit their being put into print in the June article.

A. Recommended

Elgin 7-1/2 hp.; **Evinrude Fisherman**, 5 1/2 hp.; **Evinrude Sportwin 10** (similar to *Johnson 10*); **Evinrude Lark 40**, electric start (similar to *Johnson Super Sea-Horse 40*);

Gale Buccaneer 25 Electric; **Johnson Sea-Horse 5-1/2** (similar to *Evinrude Fisherman 5-1/2*); **Johnson Sea-Horse 10**; **Johnson Super Sea-Horse 40**, electric start; **Scott 7-1/2** (similar to *Elgin 7-1/2*); **Wizard 7-1/2 hp.** (similar to *Elgin 7-1/2*).

A-

Evinrude Fastwin, 18 hp.; **Johnson Sea-Horse 18** (similar to *Evinrude 18*); **Mercury 100**, 10 hp.

B. Intermediate

Elgin 25 hp. Electric Start; **Mercury 200**, 22 hp. **Scott 25 Electric**; **Wizard 25 Electric** (similar to *Scott 25 Electric*).

The problem of fallout from nuclear tests

ON THE TOPIC of nuclear fallout and its dangers, there is a welter of conflicting opinions, and it is most unfortunate that the views expressed often represent publicity-seeking attempts by zealots who have an ax to grind. When scientists seem to disagree on questions of such a fundamental nature, the lay public is not to be blamed for finding itself puzzled and confused, and ready to question, perhaps, the honesty and competence of the scientists concerned.

There is no doubt whatever that strontium-90 is one of the nastiest customers with which we have to deal in the field of radioactivity. Like radium, it belongs to the Group IIa of the Periodic Table of Elements and tends, as do other Group IIa elements, to concentrate in the bones. Any and all cumulative poisons, such as lead and mercury, are likely to present serious dangers to human health, even to life itself, and when the material is as potent as strontium-90 with its long life and intense tissue-degenerating activity, the matter is far from trivial.

Primarily involved in this problem is the question of the minimum amount of strontium-90 which can be ingested daily without accumulation of material amounts in the body. Experiments on animals may establish such balances, but we do not know anything about them for human beings with their long life span. One cannot kill human beings that have been subjected to constant observation and tests under controlled conditions to make the necessary measurements. The absence of dependable data applicable to human beings is particularly a problem, since the question is one of long-time accumulation.

Another difficult factor in making any dependable study is the question of adequate control of the subjects of investigation. After all, there are a certain number of deaths and among them are children that have been subjected to various environmental factors; with regard to these children, there is some knowledge of the quantity of strontium-90 in their diet which could give us some data that might be extrapolated to later years. But here there is the problem posed by the high degree of mobility of our population and the lack of adequate records. It is almost impossible to get dependable records over a period of five or ten years on the strontium-90 levels in communities where the children lived.

The people who get attention in the public press, ranging from big-circulation popular magazines through the daily newspapers, are mainly the extremists on both sides and, therefore, the

Consumers' Research is fortunate in being able to present in the accompanying brief article the thoughtful and informed opinion of an eminent physicist who has broad knowledge and experience in the field of nuclear energy, on the vital question of "fallout" from experiments conducted by the United States and other governments on nuclear explosives.

lay public, through no fault of its own, is left completely in the dark and thoroughly confused by contesting claims. Because the motivations of dedicated, self-interested, and fanatical individuals are so strong, and because their remarks are sensational, and often interestingly and dramatically expressed, the magazines and newspapers play up their views, well aware that their readers prefer entertainment and excitement to the cool and unexciting facts.

Nevertheless, there can be no doubt that the continued increase in strontium-90 in our soils and atmosphere resulting from nuclear testing conducted above ground has sufficient potential danger to cause us to make the most strenuous efforts possible to bring about discontinuance of such testing. This is particularly true as regards the high latitude tests of the Russians in which obviously the fallout in our latitude throughout the world was dangerously high. Even with tests in equatorial regions, atmospheric pollution with the longer duration of fallout and greater dissipation of radioactive elements is still a serious matter.

Underground explosions

It would be eminently desirable that all nuclear testing other than possibly that conducted as deep underground explosions should be brought to an end. Further studies of the underground explosions may prove of considerable value in an important direction and tests of this kind perhaps might be continued for a short while.

The importance of the matter of underground explosions will be briefly discussed, for it relates to the question of disposal of nuclear wastes, a major concern today. These wastes contain much radioactive strontium and other equally menacing substances. The problem of waste disposal has not been solved, and no satisfactory solution seems to be in sight. Recent tests of in-

dustrial and hospital wastes encased in concrete in steel drums planted many miles offshore at a depth of 6000 feet indicate no serious seepage after a decade. However, the quantities of disposable materials in the future will be vastly greater and a decade is too short a time to establish long-time safety. (Similar disposal in abandoned mine shafts has proven dangerous.) We know too little about currents in the ocean depths, and there is reason for great concern about the disposal of these materials in the ocean because of dangers of contamination of fish and vegetable foods, which with our "population burst" are going to become more and more important items of nourishment.

Possibly disposal of these wastes by immersing them in huge masses of molten rock derived from moderately deep underground nuclear explosions may prove the safest method of disposal, for a very large fraction of the dangerous material is actually permanently embalmed in huge masses of impervious molten rock or glass produced in nuclear detonations deep in the earth.

The nature of the radioactivity danger

Some may wonder why radioactive raw materials have become such a menace. Uranium and nuclear "raw materials" are spread throughout the granitic shell of the earth's crust, and the concentration, except in a few ore beds, is exceedingly low. Thus the quantities of these substances to be found in equilibrium in our air and water supplies are exceedingly minute,—so minute, in fact, that possibly the very sparse cosmic rays which come to this earth from outer space have more effect in producing genetic changes and alterations of the nuclei of body cells than the quantities of unconcentrated radioactive raw materials in our pre-atom-bomb environment.

Man laboriously gathers and concentrates his ores into small total quantities which contain very high concentrations of these radioactive substances and then, through a variety of fission and fusion devices, he "breeds" many more and more subtly dangerous substances such as strontium-90 and cesium-137. In such concentrations and million-fold multiplication, large enough quantities of inherently and in some cases previously non-existent deadly materials (isotopes) are created to endanger health and possibly life. Some of these persist for a very long time, and so present real and enduring hazards if discharged into our atmosphere, and they finally appear in the water of our seas, lakes, and streams, vast though these bodies of water are, in total. The danger is especially great in the instances when these materials are dispersed in the atmosphere, which soon deposits its heavier non-gaseous nuclear debris on

the surface of the earth for man to inhale with every breath and to ingest with food and drink at every meal.

If it were not for the governmental pressures toward the use of nuclear energy as a source of electrical power, one could recommend strongly against the exploitation of any nuclear fuels. However, there are industrial countries such as England and France that are faced with serious power shortages, so that mankind insists on playing with this means to potential suicide, and there is therefore still need for the greatest concern—if we can bring about a cessation of atmospheric testing of nuclear weapons—with the problem of disposal of nuclear wastes.

Extreme views favored by the press

Unfortunately, as already noted, there are extremists on both sides, and the prolific writings of these people have produced the utmost confusion in the minds of intelligent and thoughtful readers among the general public. There is reason to believe that both groups are wrong and that the truth lies somewhere in between.

There are some who believe that there is more cause for concern for such diseases as leukemia and other types of cancer produced by abnormal radiations than there is with regard to the effects of radiation on future generations.

Sober, reasoned opinion has a hard time finding acceptance in this age of columnists, and magazine and newspaper exploitation of popular science leaves us with few trustworthy sources of information and interpretation. With the general public uninformed on scientific matters, and with pressure upon the public mind emanating from the menace of Soviet military and nuclear power, there is wide opportunity for the activities of all of the enthusiastic or dedicated people, cranks, fanatics, and others who have axes to grind and personal biases uncontrolled by any sense of devotion to scientific truth. Unfortunately for the public, the people who are speaking the truth, as they know it, are not so strongly motivated politically, as are some of the fanatics in this field and those who are writing sensational articles to make a fast buck; thus the real truth is not promulgated, and the government and our legislators and others are prey to the constant and energetic outpourings of the zealots and extremists.

The future of the nuclear energy danger

There appears to be no way out of this dilemma at the present juncture. Indeed, this situation pervades our whole national life, because of the skill of public relations people in manipulating the public mind and the minds of statesmen and officials. Qualified scientists have experienced a

sense of shock in things they have seen in visits to Washington when leaders of government and heads of state, including men of scientific training, were forced to veer hither and yon in their decisions and planning and to go against their own good judgment in the wash of publicity and the pronouncements of pressure groups.

It is to be regretted that the professions like the dental and medical and now even professional society groups in the physical sciences tend to be highly intolerant toward opposing views and often become dogmatic and dictatorial in matters concerning public welfare. This trend toward centralization and dictatorial direction in favor of large organized groups and government-controlled agencies is becoming alarming to anyone brought up in an era when "official" opinion did not tend to become "the" opinion—as it does now because of the sheer magnitude of government organization and operations and because of the intense and highly skilful organization of the public mind by both governmental and non-governmental publicity and pressure group agencies. In this connection it is essential to point out that by and large the government agencies and testing laboratories do an excellent job in their efforts to safeguard the public interest. However, mistakes are sometimes made, or a group seeks favorable publicity and commits itself by premature announcements. Being subject to numerous pressures,

through the budget and otherwise, they are reluctant to admit their mistakes until public opinion forces them to do so. A good case in point was the premature promulgation of the Salk polio vaccine, before the technique of preparation was perfected. Occurrences of this sort add to the confusion, especially when exploited by well-organized and vocal pressure groups.

To sum up, there are great dangers in the continuance of nuclear explosions, even in the disposal of radioactive wastes already accumulated, and the further accumulation of wastes that will result from the future development of nuclear power plants and other "peaceful uses of atomic energy."

There is every reason to take all steps possible to discontinue the production of nuclear fallout, especially by high-altitude explosions. There is special need for the exercise of the greatest responsibility and caution in statements by scientific and military experts, in order that the public may be informed, rather than confused. It is desirable that the public's views be formed in the light of knowledge rather than of propaganda designed on the one hand to urge that there is no danger from spreading radioactivity, and on the other hand that racial catastrophe is impending and the end of civilized life is close at hand, as a number of the more excited and politically-motivated scientific commentators insist.

Tight watch bands

A RECENT ITEM in The New England Journal of Medicine reports damage to the nerves of a part of one hand which caused numbness of the thumb and the area at its base. Increase in the area of numbness finally caused the patient to resort to medical advice. No cause for the trouble was found, and during the next two months the normal lack of sensation extended to involve the index finger.

It was noted by the physician that when the patient's wrist watch was removed, a deep impression remained in the skin where the band had been. (It happened that she wore the watch almost continuously, even at night.)

The abnormal tightness was the result of the hole in the watch band not happening to be in the right spot for an easy fit, and because the leather was thick and strong, it did not stretch as was anticipated.

Six weeks after removal of the wrist band, there was only a slight gradual improvement of sensation in the area that had become numb. The loss

of sensation was noticeably mitigated in three months but was not entirely corrected after considerably more than a year.

The difficulty described might happen to many persons, for the nerve involved is one that is especially susceptible to injury. There was even an atrophy or wasting away of the tissues at the base of the thumb, and traces of the injury extended to a distance of 6 inches from the zone compressed by the watch band.

Persons who are accustomed to wearing their watch bands tight would do well to consider the possibility that a slight or even considerable degree of harm might be the result of the abnormal squeezing of the tissues of the wrist. No one should wear a wrist band or bracelet that leaves a deep impression in the flesh when it is removed. If a new hole is needed in a leather watch band, see that the jeweler—or the man of the house—provides it promptly, before harm is done to the nerves and muscles of the wrist and hand.

What's in a name?

The product may change and change and change again, but the old name goes on and on

THE makers of *Cafotan* tablets, one of the patent medicines mentioned in our article on "Painkillers and 'cold remedies'" in the October 1959 BULLETIN, have written to Consumers' Research to say that the *Cafotan* made today differs in composition from the product which we discussed. As a matter of fact, says Premo Pharmaceutical Laboratories, Inc., the maker, there have been *two* changes in formulation since the tablets we examined were made.

Originally *Cafotan* contained aspirin, phenacetin, caffeine, and quinine sulfate. Although the maker claims that this formulation was discontinued well over 10 years ago, during World War II, this 4-ingredient *Cafotan* is the kind that Consumers' Research obtained when we recently acquired samples of various drugs from the current stock of a busy retail drug store. During World War II, according to the maker, quinine sulfate was eliminated from the formula, leaving *Cafotan* for the time being as a straight "APC" tablet—aspirin, phenacetin, caffeine—not essentially different from dozens of other APC preparations. Then in 1958, Premo made yet another change, substituting salicylamide for aspirin.

Through all these changes, the *name* of this proprietary drug remained the same. "How does a buyer know which kind of *Cafotan* he's getting?" one may well ask. The answer is that the consumer must make it a point to study the small-print list of ingredients on the container in order to tell just what drugs make up the particular pills he happens to get. And there is nothing we know of to prevent Premo Pharmaceutical Laboratories from coming out with a new and different *Cafotan* as often as they may wish, while still taking advantage of the consumer acceptance of the original name.

In our previous article, we spoke of the quinine sulfate in *Cafotan* as "a drug that can produce unpleasant and occasionally serious effects in those sensitive to it." Elimination of this ingredient was surely an improvement from the point of view of many potential users of *Cafotan*. But the change from aspirin to salicylamide raises rather important questions. Although the chemical name salicylamide has some similarity in sound to the chemical name for aspirin (acetylsalicylic acid), and the two drugs are related chemically, the mode of action of salicylamide in the body is not well understood and may differ significantly from that of aspirin.



The two containers shown both identify their contents as CAFOTAN without any indication that the word is a registered trade mark, not a chemical or pharmaceutical term. On the left is the old style tin used before World War II, on the right a current box. A sample of the intermediate version was not available.

It may well be that for some persons and under some circumstances, salicylamide is to be preferred to aspirin, but the choice should surely be made intentionally under competent medical advice and should not be determined without choice by the user, and without notice to him, by a manufacturer's changed formulation of a product which continues to be sold under the same name as before.

* * *

Of course, *Cafotan* is but one of a host of shifting-ingredient products. The practice of changing the product while keeping the name the same is common enough in the proprietary drug industry and common too in dentifrices and cigarettes, and in the broad field known as "chemical specialties." All sorts of household chemicals, for example, are changed frequently in formulation—it often happens even that different formulations are sold simultaneously in different areas under the same brand name. This practice, from the consumer's standpoint, is most undesirable; a given name should apply to a specific product, not to just anything the manufacturer may wish to introduce under the same umbrella of his advertising and established consumer acceptance. If a brand is to have a significance, it should be a clear one, else the constant urge to "buy by brand" and to put your trust in established brand names contains an element of guile and dissimulation. If a detergent manufacturer wishes to market several mixtures under one name, let him call them *Ixxo A*, *Ixxo B*, and so on. Then the buyer will know that if *Ixxo A* suits him, the same good result might not follow his use of *Ixxo B*—and that the advertising claims on TV may very likely apply to neither.

Sometimes a changed formula is advertised as

"new," "improved," or the like, but then another "newer" version, and another, may come along in time, so the user after a while gets from the label no idea at all of which formulation he is getting—if indeed the maker has ever disclosed the details (including quantities) of any formulation.

But, with drugs (and some food products), an alert consumer can find out whether he is getting

the same product as before, with the same hazards or lack of them, if he is willing to read carefully the small print on the label. When a new or different drug turns up as an ingredient in a patent medicine that one has felt it safe to use without medical prescription, one will be wise, before buying, to consult the family physician as to continuing use of the product for oneself or one's children.

Garden hose—plastic, or rubber composition?

PLASTIC GARDEN HOSE is much lighter in weight and more convenient to handle than rubber hose, use of which is now limited mainly to industrial purposes. Consumers' Research has had several different brands and types of plastic hose in use and allowed them to be exposed to the elements all the year round for some years. Our observation has been that plastic hose is on the whole very satisfactory and has great advantages, particularly for a woman, in its lightness. As there are many brands on the market that are guaranteed for periods up to 12 years, there seems to be no point in attempting to differentiate between the specific brands of makes that carry a guarantee.

There are several different grades of plastic hose, but almost any of them is likely to be more satisfactory to consumers than the old-fashioned rubber hose, much of which, if of good quality, is very heavy, and which furthermore eventually rubs off on the hands, and becomes deteriorated by loss of elasticity, development of leaks, and separation of plies.

Plastic hose comes in several different weights and thicknesses. One of the weaknesses of this type of hose is that light or thin grades tend to pull off or break off at the couplings unless they are properly supported, and used with some care. Some of the very cheap transparent plastic hose becomes stiff or discolored, or mottled and opaque. Most plastic hose nowadays, however, does not become stiff, since manufacturers have generally found a way to overcome this fault by proper choice of plastic compositions and grades.

One consideration for the homemaker is that garden hose should be purchased with a large enough diameter so that it can provide some fire protection if needed. It is recommended that a minimum of 1/2 to 5/8 inch diameter hose be purchased. Smaller hose is offered to permit very low prices as "loss leader" items, and the very small hose would not deliver enough water to be useful for fire protection in and about the house. If the hose is of very small diameter, its value for lawn and garden work is diminished wherever long lengths are used, and where the water pressure is

low usually, or at times (as it is with some city and many private water supply systems).

Plastic hose of several diameters is listed in leading mail-order catalogs. 5/8 inch is the largest diameter listed; it is claimed to deliver 12 to 17 gallons per minute. 1/2 inch, 8 to 10-1/2; 7/16 inch, 5-1/2 to 7-1/2 gallons per minute. Rubber hose is available in 3/4 inch and one inch nominal diameters, but plastic hose is not available through mail-order catalogs and stores in these large sizes.

Relative prices

Plastic hose is available in a wide range of prices. 1960 mail-order catalogs list it at prices from less than \$1.75 to nearly \$10 for a 50-foot length.

The lowest price for plastic hose in Sears summer catalog is \$1.67 for 50 feet in 7/16-inch diameter hose (postage extra). Sears highest-priced plastic hose is \$8.47 for 50 feet in 5/8-inch diameter. (The last one mentioned is said to be reinforced.)

In Continental catalog, 1960 Spring and Summer Supplement, *Koroseal* plastic hose is listed at \$9.95 for 50 feet of 5/8 inch. This is a luxury grade plastic hose. Lower-priced 5/8-inch hose is available that will give good service, as CR's observations of 10 brands purchased over a period of ten years indicates.

All of the 10 brands have given good service, and three of the brands which have been in use during the 10-year period have shown no appreciable deterioration in constant exposure to weather. They ranged in price from \$2.79 to \$5.75 for 25-foot lengths.

One experienced consumer who has long used plastic garden hose notes that some makes may get stiff in cold weather to a degree which makes them subject to damage if they are roughly handled; they may even break into pieces, if straightened out forcibly. Yet he has found that when warm weather comes this type hose will become serviceable again. He suggests also that it might be wise not to buy the kind of hose which is so thin as to be flattened in the coil when sold. The walls of a hose of this kind are likely to be too thin to withstand hard service.

Devices sold for draining flooded basements

Two electric-powered pumps and a gadget using water power to move water

WANT to pump water up to a height of 6 feet at the rate of 300 gallons per hour—without an electric motor or gas engine? Advertisements for the *Speedy Drainer* seemed to promise such results, but actual performance in tests at Consumers' Research was much less impressive.

Operation of the *Speedy Drainer* (or *Drain-master*, under which name the same product, or one that appears to be the same, is sold by another advertiser) depends on the pressure of your water supply. The device is actuated by the flow of water from your faucet; if the available pressure is too low, the *Speedy Drainer* may not be able to pump any water at all, much less the advertised 300 gallons per hour.

In tests at Consumers' Research with water supply pressure of about 80 p.s.i. (pounds per square inch), which is higher than that available in many homes, water was lifted 6 feet at the rate of 105 gallons per hour. But for each gallon pumped, more than $2\frac{1}{2}$ gallons of tap water were used. At a pressure of 40 p.s.i., the pumping action was about one fourth as effective, and the amount of tap water used was greater. At 20 p.s.i. (a fairly low pressure, but by no means outside the range of possibility in homes), when the effort was made to raise water 6 feet, no water at all was pumped. Rather, water from the tap ran into the water to be lifted, adding to the water in the cellar at a rate of about 30 gallons per hour.

In judging the pumping rate of any device, keep in mind that *gallon per hour* is a rather smaller unit than might offhand be supposed. Even 300 gallons per hour, the advertised promise of *Speedy Drainer* (but not delivered in our tests), would not be a torrent of water as some might visualize. It's only 5 gallons a minute ($\frac{2}{3}$ of a cubic foot). A 20 x 40 foot basement room flooded to a 6-inch depth would contain 3000 gallons of water—a 10-hour job for *Speedy Drainer* to lift 6 feet, even if it worked as well as claimed, and more than a 4-day job at the rate of pumping we found with a 40 p.s.i. water pressure, assuming that no more water came in and none flowed out except through the cellar drainer. It might very often happen that water would flow into a flooded basement at a much faster rate than one could pump it out with a *Speedy Drainer*.

A real pump works better

Much more effective for pumping, of course, is a real pump, motor-driven. Low-cost centrifugal

pumps are widely advertised as devices for draining, small irrigation jobs, etc. One of the most frequent advertisers in the Sunday papers and in some magazines is the seller of *Labawco* pumps. Consumers' Research obtained and tried a *Labawco Type P* centrifugal pump at \$7.95. (A centrifugal pump has a rotating impeller which forces the water into rotatory motion so that there is a tendency for it to fly outward through an appropriately located discharge connection. Many pumps in automatic washing machines are of this type.)

Anyone who considers buying the *Labawco* or a similar pump should realize that what he pays for the pump is only the beginning of his costs, unless he happens to have all the necessary accessories on hand. A motor (or gas engine) is the first need, then a mounting plate or board and a coupling. (*Labawco Type P* is supplied with a free coupling, according to the advertisement, but when the pump arrived with its free coupling, a printed letter was found which announced that the free coupling was suitable for temporary service only. A coupling for permanent installation is offered at \$1.50.) Then you will need a length of 1-inch diameter suction hose (38 cents a foot), some 1- or $1\frac{1}{4}$ -inch discharge hose, or an adapter for 75 cents to make it possible to use your garden hose, and probably a strainer or screen for the inlet.

Unless the pump itself is to be at least partially submerged, or you are willing to go through a fairly involved priming operation every time you start to pump, you'll need a "foot valve" at \$3.45 to go on the end of the inlet hose. Add some hardware (clamps, screws, etc.), wire, and switch for the motor, your time for assembly, and you'll be ready to pump.

How fast did it pump?

The *Labawco Type P* pump is advertised to pump "up to" 3000 gallons per hour, and possibly it would, in an ideal setup. Consumers' Research tested the pump briefly in a manner we thought likely to be typical of use in an average home for such jobs as emergency cellar draining. The pump was directly coupled to a $\frac{1}{4}$ -horsepower, 1725-rpm. motor; inlet hose was one-inch diameter and discharge line was $\frac{5}{8}$ -inch garden hose. At a lift of $4\frac{1}{4}$ feet, pumping was at the rate of 630 gallons of water per hour. The pump would take about $4\frac{3}{4}$ hours to empty the 3000 gallons in the flooded basement previously discussed (if the lift was $4\frac{1}{4}$ feet). It can readily be seen that such

a pumping rate would not handle real flooding of a cellar, but it might be more than adequate for helping to clean up *after* a flood if one has already at hand the needed motor and other accessory equipment. With larger hoses, the *Type P* pump could be expected to pump at higher rates.

For pumping at moderately high pressures, as needed for spraying from a hose or operating a sprinkler, the Labaw Company advises use of its gear pump, *Model 2 3/8 SG*. In brief trials at Consumers' Research, this pump was found to raise water 4 1/4 feet at the rate of 260 gallons per hour, using the same motor as in the trials of the *Type P* pump. The delivery pressure was judged ample for spraying or operation of a sprinkler.

An important limitation of the *Model 2 3/8 SG*, as of all gear pumps, is that it is suitable for clear liquids only. Gear pumps wear out quickly if used with liquids containing gritty solids such as dirt or sand, and they are relatively noisy.

The Labaw Company offers to advise prospective buyers which of their pumps would be most suitable for a given purpose. It would be wise, if time permits before ordering any of their pumps, to send complete details of the proposed use (quantity of water to be moved per hour, height of lift, etc.) and get the company's recommendation.

Shown here are two ways to advertise the same product; each reproduction is full size. The upper advertisement, from the New York Herald Tribune's Sunday mail-order section, claims a performance rate far above that found by Consumers' Research in its tests, and offers the product for "only \$2.98." The lower ad, from a catalog of the Alsto Company, is couched in more conservative terms; it shows an illustration apparently reproduced from the same sketch used for the other advertisement, but the reproduction is bigger and clearer, so that the manner of operation is unmistakable. There are no claims as to rate of draining, and the reader is told to turn the water on "full blast" (implying the need for good water pressure to make the gadget operate). Further, Alsto offers the device at about one-fourth lower price than the other advertiser, without any suggestion that the price is a special bargain. This is a fine example of the economic truism that the only way to tell whether a price is "low" or not is to compare it with prices charged elsewhere for the same or similar products.

A. Recommended

Labawco Type P Centrifugal Pump (L. R. H. Labaw & Co., Belle Mead, N. J.) \$7.95. Also available in assemblies with motor, from \$25.95. The *Type P* pump, coupled to a suitable motor and with other needed accessories, is suitable for cellar drainage and similar jobs.

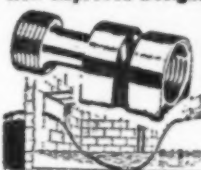
Labawco Type 2 3/8 SG Bronze Gear Pump (L. R. H. Labaw & Co.) \$18.95. Fittings are supplied for 1/2-in. pipe inlet, garden hose outlet. The pump is to be directly attached to a 1/2-in. motor shaft, and is suitable for pumping where a moderate pressure is needed on the outlet line, as for spraying or sprinkling, but may not be used to pump liquids which contain dirt or sand. Priming or a foot valve is not required for lifts less than about 15 ft.

B. Intermediate

Drainmaster (Alsto Co., 4007 Detroit Ave., Cleveland 13) \$2.25, postpaid (Cat. No. 489). A machined brass casting, about 3 in. in length, with provision for attaching two hose lengths; this device operates to lift water by the laboratory aspirator principle. When abundant tap water is available at a good pressure (say, 40 p.s.i. at least) and at low cost, the *Drainmaster* would be of some use for a very small pumping job. *Speedy Drainer* (\$2.98 from Meridian Products Co., 366 Madison Ave., New York 17) is apparently the same product. (Although sold as *Speedy Drainer*, the device is marked with the molded-in name *Drainmaster*.)

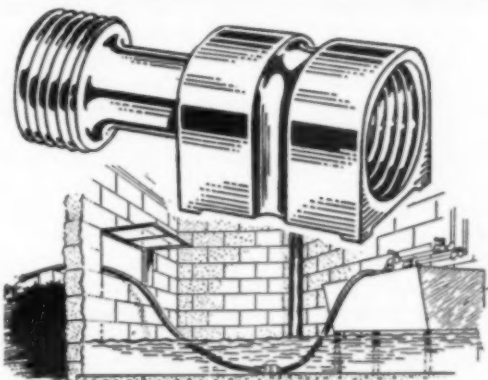
DRAIN 300 GALS. PER HOUR

New Improved Design. Needs no Motor. Lifts Water 6-8 Ft.



When water gets in your cellar, or you want to drain out a pool, vat, cistern, excavation, bath, don't break your back hand-pumping or bailing. Just connect garden hose to nearby water faucet and free end to intake side of **SPEEDY DRAINER**. Connect another length of hose to discharge side, turn on faucet, and **SPEEDY DRAINER** pumps out 300 gallons per hour, right down to the floor. **SPEEDY DRAINER** is all brass, and has no moving parts to wear, jam or rust. It's priceless when you need it, yet costs only \$2.98 postpaid. Plus postal charges if C.O.D.

MERIDIAN PRODUCTS CO., 366 MADISON AVE. (at 46th), Dept. D-212, N. Y. 17



DRAINMASTER — Drains basements swimming pools, fish ponds, window wells or trenches. Connect short hose from intake end of *Drainmaster* to water faucet. Attach second hose to discharge end of *Drainmaster* and run hose to drain or sewer. Turn water faucet on full blast and watch water drain from your basement. Use over and over. No. 489, \$2.25 ppd.

Are home furnishings advertisers missing the boat?

DEPENDABILITY in a household appliance is what women want most. At least that is the view of B. A. Chapman, executive vice president of American Motors Corp., and general manager of the Kelvinator Division. If Mr. Chapman is correct in his analysis, there are a lot of home furnishings advertisers who are throwing away large sums on full pages in what are called the "home shelter" magazines. As a matter of fact, that is just what the foremost trade paper in the field thinks is happening. Reporting an analysis of the full-page advertisements in the April issues of *House & Garden*, *Better Homes & Gardens*, and *Living*, Louis Goodenough noted that something like one third of the ads showed people in formal or semi-formal evening clothes, and commented that in this country we don't dress for dinner as the British often do. "It's about time," he said, that we "have a return to home furnishings that do something for today's consumer."

Women who were asked for their comments on the advertisements in question remarked that "nobody with children could live" in rooms like those shown in the illustrations and furthermore "nobody with children would want to," the furnishings were "too ornate" and "not for anything having to do with real family life," and the woman in one particular ad must have been a model who "certainly has never been in a house."

Most homemakers probably take at least one of the "shelter magazines" and have no doubt been amused at advertisements such as one showing the picture of a woman in evening dress frying food in a skillet on the stove in her new kitchen, or another in which a woman wearing a rose-colored evening dress with slippers to match is examining the new foam-rubber upholstery of her light beige sofa, resting her feet on the pastel covering, and a third in which a woman in a long white evening gown lounges on multi-colored pillows on the floor of her living room while contemplating wall-to-wall carpets of various shades. All of these and more were found in the April issue of a swank "shelter magazine" that shall be nameless because it is typical of how some advertisers try to impress women with the elegance of their particular line of products.

Actually most suburban homemakers would think it pretty silly for a woman to act as the ads imply, and they are not moved by such appeals to buy the merchandise, even if they have the money. As for the models shown in some of the

home furnishings advertising, they are likely to have greater appeal to the men (dealers) than to the women, but it is the women who after all are the potential customers for the furniture and appliances.

In an elaborate presentation of contemporary kitchens, one major manufacturer of home appliances shows a slim model with an elaborate blond hair-do, wearing a turtle-neck sweater and skinny pants, with a dainty apron tied around her waist, putting the finishing touch to a casserole, in a well-staged turquoise and brown kitchen, complete with television and a phonograph, Scandinavian horse center pieces on the revolving table top, and a full length, wide curtain completely covering a very large window. Impressive on a television show, perhaps, but not at all practical for the homemaker who is a mother of three active children, with a dog or cat besides.

There is always something about a kitchen or some other room in the house that the homemaker wants to do over. Sometimes she'd like to throw the whole thing out and start fresh, but she seeks an improvement in the workability or the livability of her home, not a stage setting to be admired by someone looking in the window. Appliances, furniture, and furnishings that are attractive, but which save work and effort, that can be cleaned easily, and are not so complex that they require an engineer for effective operation or a skilled serviceman to keep in order, a pop-up toaster that functions consistently, a steam iron that operates on normal tap water without clogging, a refrigerator that defrosts automatically without turning food in the freezer compartment to blocks of ice because it has thawed on the surface and refrozen, are what she is looking for.

Above all, as our voluminous correspondence shows, consumers want appliances that function effectively and well over a reasonable life cycle. When in the normal course of operation a serviceman's skilled attention is needed, they want one available, at a reasonable charge, to attend to the repair promptly, and with a minimum amount of trouble, mess, and inconvenience. It is the opinion of Mr. Chapman of Kelvinator, previously mentioned, that women are likely to prefer their present model of some appliance if it is working well to a new one that has a profusion of confusing dials and button controls. He believes that the appliance industry is facing a challenge to provide consumers with appliances that are simpler, lower

in cost, more functional, and more dependable; that the homemaker "wants a kitchen and laundry that will give her more freedom, not work areas that are a way of life."

If Mr. Chapman is correct in his view that consumers want more dependability rather than style and novelty in their home furnishings and appli-

ances, then the pseudo glamour and elaborate styling of the sales literature and advertising of many manufacturers are missing the boat by a wide margin. Perhaps the ads are aimed at the dealers and salesmen, but they are certainly far removed from the practicality of everyday living in these days of a multitude of children and puppies.

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High fidelity, amplifiers, stereo*	Mar...	20
new developments*	Jan...	23
record players, stereo*	Apr...	2
Home repair rockets	May...	37
Hosiery, women's, buying	May...	33
Irons, steam*	Jan...	16
Landscape planting to attract birds	June...	38
Lawns, control of crabgrass	Apr...	37
Lipstick, coal-tar dyes	Feb...3; May...	3
Markers, felt-pen*	Mar...	17
Merchandise, unordered, returnable?	June...	3
Milk, overuse*	Mar...	2
penicillin, DDT residues	Feb...4; Apr...	38
Mixers, portable electric*	June...	18
Motion pictures*	each issue	
will sex and violence pay off?	Feb...	32
Mowers, power, care	May...	3

	Month	Page
Outboard motor*	June...	25
Paint sprayer, rotary*	Apr...	22
Pools, swimming, chemicals for	Apr...	3
Projectors, home movie, 8 mm.*	Mar...	29
Radios, clock*	Feb...	20
portable transistor*	Jan...	6
table model*	Feb...	20
Record players, stereo*	Apr...	2
Records, phonograph*	each issue	
vending machines	June...	4
Reducing nostrums, appetite-depressant	Mar...	37
Reducing weight, suggestions	Feb...	38
Roofs, white coating for built-up*	June...	33
Rugs and carpets, care*	May...	28
plastic runner, protective	May...	38
selection*	Apr...	6
Screen materials, window*	May...	2
Shirts, men's white*	Jan...	9
Shoe dressings, white*	May...	10
Socks, stretch	May...	33
Spot and stain removal*	Mar...	16
Stainless steel, cleaning	Mar...	28
Stamps, trading, not free	June...	37
Stereo sound equipment, see High fidelity		
Stool, step, low*	May...	39
Sunburn, danger	Apr...	38
Sunlamps*	Jan...	27
Suntan, solution to create artificial	May...	4
Sweater, Orlon, misrepresentation	June...	3
Swimming, health hazards	June...	4
Television, antennas, "plug-in"*	Jan...	2
Textiles, American Standard, new*	May...	32
labelling act, new*	Mar...	9
Viewer for 8 mm. movies	Mar...	31
Washer-dryer combination*	Apr...	12
Washing machine, automatic*	Apr...	11
repair service, efficient	May...	37
Water softening equipment*	Feb...	23
Entries marked () are longer or more comprehensive items.		
NOTE: Reprints from previous Consumer Bulletins are listed on p. 11 of the June '60 issue.		

Phonograph Records

BY WALTER F. GRUENINGER

Please Note: Stereo records are indicated by the symbol Ⓢ. Ratings (AA, A, B, etc.) apply first to the quality of interpretation, second to the fidelity of the recording. Most performances are available on both stereo and regular LP records.

Ⓢ**Berlioz: Requiem.** Boston Symphony and New England Conservatory Chorus under Munch. 4 sides, RCA Victor LDS 6077. \$11.96. One of the most impressive stereo sets released to date. It, too, belongs in the basic stereo library. This "prodigious and sublime work," as Liszt called it, demands a conductor and performers who believe in it. There's no doubt about that here. And it demands the best possible recording. It gets that, too. I hear a canvas of sound as wide as the room, with brass fanfares in the "Tuba Mirum" coming through as clean as the gentle voice of the tenor soloist, Simoneau, in the "Sanctus." The attractive packaging and the booklet, with many full color plates, add frosting to the cake. AA AA

Ⓢ**Coward: Bitter Sweet.** Vanessa Lee, Roberto Cardinali, Julie Dawn, John Hauxwell, etc. Angel S 35814. \$5.98. The romantic story and music which constitute Noel Coward's *Bitter Sweet* seem to endure. "I'll See You Again" and "Zigeuner" don't lose their charm. The principals sing quite well when they don't press too hard, and so does the chorus. But Angel's companion releases, *The Merry Widow* and *Lilac Time*, offer better singers. Astonishing realism of solo voice recording in *Bitter Sweet*. The orchestra sounds back a bit, with an empty hall effect—right, too. A AA

Ⓢ**Haydn: The Salomon Symphonies, Vol. II.** Royal Philharmonic under Beecham. 6 sides, Capitol SGR 7198. \$17.94. What treasure awaits the listener! These half dozen symphonies produced for Haydn's London visit rank among the heavenly masterpieces of the time. And in Sir Thomas they have a gifted advocate. Poetry and fire in abundance. Rich sounding recording. A delight in all respects. AA AA

Ⓢ**Mahler: Das Lied von der Erde.** Maureen Forrester (contralto) and Richard Lewis (tenor) with the Chicago Symphony under Reiner (3 sides) & **Haydn: Symphony No. 88.** Chicago Symphony (1 side). RCA Victor LSC 6087. \$11.96. *Das Lied* seems to be Mahler's greatest work. The performance here of the orchestral score ranks second to none recorded. Richard Lewis' part sounds a bit light in spots, but that's the way he sings it—sharp volume contrasts; but he sings with style. Maureen Forrester meets every challenge with a full voice, well nuanced. The engineers have done their job brilliantly. Overall stands Fritz Reiner, the conductor of the performance. The Haydn filler breezes along agreeably. AA AA

Ⓢ**Milhaud: The Four Seasons.** Ensemble of soloists of the Concerts Lamoureux under the direction of the composer. Epic BC 1069. \$5.98. Four concertinos depicting the seasons in a style foreign, as you'd expect, to the better known Vivaldi's *Four Seasons*. Only future generations will tell whether Milhaud's work will last as long as Vivaldi's. Presently, it certainly commands attention among the more sophisticated listeners. The players' skill is apparent, and it must be assumed the composer is pleased with the result. Fine sound. AA AA

Ⓢ**Poulenc: La Voix Humaine.** Denise Duval (soprano) with Orchestra under Prêtre. RCA Victor LSS 2385. \$6.98. A stunning portrayal by a French artist of the first rank. Poulenc's lyric tragedy of Coteau's one act monodrama presents a young, elegant woman parting from her lover who is at the other end of the phone. Excellent recording. AA AA

Ⓢ**Puccini: Madame Butterfly.** Gigli, Dal Monte, etc., under De Fabritiis. 4 sides, Angel GRB 4000. \$9.96. Under the title, "Great Recordings of the Century," Angel continues to release LP versions of famous 78 rpm. sets. This one was recorded in 1939 and sounds better than the RCA Victor pressing of the same performance on LCT 6006. In *Butterfly*, as on the new RCA Victor LM 2337 which offers 13 songs and arias recorded between 1925 and 1930, Gigli's singing is splendid. Toti Dal Monte's thin,

rather childish sounding voice may irritate some despite her tremendous artistry. Fine performance in all other respects. A B

Ⓢ**Sabicas: Flamenco Variations on Three Guitars.** Decca DL 8957. \$3.98. A unique flamenco disk. Sabicas played second guitar over his first recording and third over both the others. A gimmick, indeed, but exciting flamenco guitar music results when the artistry is so finely tempered and admirably set forth. Very well recorded. AA AA

Ⓢ**Stravinsky: Le Sacre du Printemps.** Minneapolis Symphony under Dorati. Mercury SR 90253. \$5.98. Stravinsky's ballet depicts the pagan rites of spring. The music may offend ears attuned to Mozart, but it gains champions each year. Always a swell hi-fi rig demonstration piece, this disk's sonics bow to few. Fortunately, Dorati and his men outdo themselves, give us a superb, full-blooded performance. AA AA

Ⓢ**Telemann: Four Concertos and One Sonata A Quattro.** I Solisti di Zagreb under Janigro. Bach Guild BGS 5028. \$5.95. Agreeable music—concertos for oboe, for viola, for violin, make for contrasting fare. All are fairly well played by this famous group, though the soloists reveal moments below the best imaginable. Well recorded. A AA

A Night with Jerome Kern. Earl Wrightson, Louis Hunt, with Percy Faith and His Orchestra. Columbia CL 1386. \$3.98. Enjoyable performances of "The Song is You," "They Didn't Believe Me," "Look for the Silver Lining," "Ol' Man River," "Why Do I Love You," and others. The orchestra offers interesting background arrangements which never intrude. Wrightson has sung this repertoire for years and he sounds better on each disk. A AA

Ⓢ*In a German Beer Garden.* Joseph Holzer and His Woodchoppers. Vox STVX 426.040. \$4.98. A German band bats out sentimental and gay German tunes. . . the kind you'd expect in a beer garden. Very well recorded. AA AA

Les Compagnons (singers). Capitol T 10227. \$3.98. A group of 9 men, generally regarded as France's finest, present 12 light songs including "Les Trois Cloches," "Venus," "Carioca," "Mon Ami," "Gondolier." Agreeable, diverting in-between music. Well recorded. AA AA
Somebody Loves Me. Dinah Shore (vocalist). Capitol T 1296. \$3.98. More sentimental favorites sung intimately, attractively. Included are "It's Easy to Remember," "East of the Sun," "Something to Remember You By," and many others. Well recorded. AA AA

Half a dozen mono LP's were purchased at Woolworth's to see what consumers get for \$1. The Philharmonic Family Library of Great Music Album 5 includes the Mendelssohn *Italian Symphony* and the Tchaikovsky *Nutcracker Suite* played by unnamed musicians. The performances were rather good, recording only fair, with "squeezed" highs as heard on most LP's a decade ago; surfaces were noisy. Album 12 of this series offered the Rachmaninoff *Piano Concerto No. 2* and Schubert's *Unfinished Symphony* played by unnamed artists. Performances were poor to fair, surfaces were noisy, frequent groove jumping occurred. Judged a better value, if you like the music between the classics and jazz, were four disks issued under the Parade label. All sounded like recent recordings presenting adequate performances pressed on quiet surfaces. Artists were named, though they are not well known. Heard were Selections from *Showboat* on SP 344, *Accordion Strings* on SP 352, *Gay 90's* on SP 355, *Harmonica Harmonies* on SP 318. Some of the pieces recorded on these disks: "My Gal Sal," "Hello My Baby," "Smoke Gets in Your Eyes," "I Feel Merely Marvelous," "Sunbonnet Sue." Suggestion: pick one or two Parade disks and try for yourself.

Ratings of Current Motion Pictures

THIS SECTION aims to give critical consumers a digest of opinion from a wide range of motion picture reviews, including the motion picture trade press, leading newspapers and magazines—some 17 different periodicals in all. The motion picture ratings which follow thus do not represent the judgment of a single person, but are based on an analysis of critics' reviews.

The sources of the reviews are:

Boxoffice, Cue, Daily News (N. Y.), The Exhibitor, Films in Review, Joint Estimates of Current Motion Pictures, Motion Picture Herald, National Legion of Decency, New York Herald Tribune, New York Times, The New Yorker, Parents' Magazine, Release of the D. A. R. Preview Committee, Reviews and Ratings by the Protestant Motion Picture Council, The Tablet, Time, Variety (weekly).

The figures preceding the title of the picture indicate the number of critics whose judgments of its entertainment values warrant a rating of A (recommended), B (intermediate), or C (not recommended).

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

adv—adventure
biog—biography
c—in color (Anso, Eastman, Technicolor, Trucolor Warner Color, etc.)
car—cartoon
com—comedy
cri—crime and capture of criminals
doc—documentary
dr—drama
fan—fantasy
hist—founded on historical incident
mel—melodrama
mus—musical
mys—mystery
nov—dramatization of a novel
rom—romance
sci—science fiction
soc—social-problem drama
trav—travelogue
war—dealing with the lives of people in wartime
wes—western

A	B	C	
2	4	1	Adventures of Huckleberry Finn...dr-c AYC
—	2	1	All the Fine Young Cannibals...dr-c A
—	2	2	Amazing Mr. Teas, The (British)...com-c A
—	3	—	American in Salzburg, An (German)...war-com-c AY
—	2	4	Angry Red Planet, The...sci-c A
—	3	1	Angry Silence, The (British)...soc-dr A
—	3	2	Apartment, The...com A
—	1	2	Battle Flame...war-dr A
—	1	3	Battle of Blood Island...war-mel AY
—	10	2	Battle of the Sexes, The (British)...com A
—	—	3	Beatniks, The...soc-mel A
—	6	3	Because They're Young...nov AY
—	8	3	Behind the Great Wall...trav-c AY
—	2	1	Bell Boy, The...com AY
—	3	—	Bells Are Ringing...mus-com-c A
10	6	1	Ben-Hur...hist-dr-c AYC
—	2	2	Big Chief, The (French)...com AY
1	2	—	Big Jeeter (Italian)...dr AYC
3	5	4	Black Orpheus (French)...dr-c A
—	1	3	Blitzkrieg (German)...war-doc A
—	2	8	Blood and Steel...war-dr AYC
—	6	2	Bobbikins (British)...com AYC
—	4	3	Boy and the Pirates, The...adv-c AYC
—	4	1	Breakout (British)...war-dr AY
1	6	4	Bridal Path, The (British)...com-c A
1	9	1	Broth of a Boy (Irish)...com AYC
—	2	3	Campbell's Kingdom (British)...mel-c AYC
2	9	8	Can-Can...mus-com-c A
—	2	3	Carmen Comes Home (Japanese)...com AY
—	3	—	Carry On, Constable (British)...com AY
1	3	1	Carry On, Nurse (British)...com AY
—	6	2	Chance Meeting (British)...cri-mel-c A
—	1	5	Chasers, The (French)...dr A
1	3	—	Cine Ballets de Paris (French)...doc-c AY
—	2	2	Circus of Horrors (British)...mel-c AY
—	1	2	College Confidential...dr A
—	7	3	Comanche Station...wes-c AY
—	4	2	Come Back, Africa...doc-dr A
4	7	2	Conspiracy of Hearts (British)...war-dr AY
—	2	2	Cossacks, The (Italian)...hist-dr-c AYC
—	—	3	Counterplot...mys-mel AY
—	3	—	Cover Girl Killer! (British)...cri-mel AY
—	4	5	Crack in the Mirror...dr A

A	B	C	
—	1	3	Crazy for Love (French)...dr A
—	1	3	Cuban Rebel Girls...war-dr A
—	—	3	Dangerous Age, A...mel A
—	3	—	Dinosaur (British)...sci-c AY
1	11	—	Dog of Flanders, A...com-c AYC
—	4	3	Dog's Best Friend, A...cri-mel AYC
—	3	4	Drunken Angel (Japanese)...dr A
—	3	4	Easiest Profession, The (French)...com A
—	1	2	Electronic Monster, The (British)...mys-mel A
—	2	1	Enemy General, The...war-dr A
—	1	2	Escape from Terror...mys-mel-c AY
—	6	8	Expresso Bongo (British)...dr A
—	2	1	Fall of the House of Usher, The (British)...mel-c A
—	—	5	Female, The (French)...dr A
—	2	1	Female Flenda...mel A
—	2	1	Ferry to Hong Kong (British)...mel-c AY
—	3	—	Fidello...mus-dr AY
—	2	1	Five Bold Women...wes-c A
—	5	3	Five Branded Women (Italian)...war-mel A
—	10	3	Flame Over India (British)...adv-c AYC
—	8	3	Flying Fontaines, The...mel-c AY
—	2	7	Four Fast Guns...cri-mel A
—	3	2	From the Terrace...nov-c A
—	7	11	Fugitive Kind, The...dr A
3	3	1	Gallant Hours, The...war-dr AYC
—	1	2	Gangster Story...soc-mel A
—	9	5	Gazebo, The...com A
1	10	3	Gene Krupa Story, The...mus-biog A
—	3	2	Get Outta Town...cri-mel A
—	3	2	Giant of Marathon, The (Italian)...adv-c AY
—	—	3	Girl in a Mist, A (Japanese)...dr A
—	2	1	Girl on Death Row, The...soc-dr A
8	8	1	Glen Miller Story, The (reissue)...mus-biog-c AYC
—	1	6	Gunfighters of Abilene...wes AY
—	4	5	Guns of the Timberland...mel AYC
—	1	2	Heaven on Earth...dr-c AYC
—	7	2	Hell Bent for Leather...mel-c AY
1	8	6	Heller in Pink Tights...dr-c A
—	1	3	Hercules Unchained (Italian)...adv-c A

A	B	C		
2	2	1	Hiroshima, Mon Amour (French).....	war-dr A
—	2	4	Holiday Island (Italian).....	dr-c A
4	9	3	Home from the Hill.....	dr-c A
—	2	5	Human Condition, The (Japanese).....	soc-dr A
—	2	6	Hypnotic Eye, The.....	cri-mel A
—	2	1	I Passed for White.....	soc-dr A
—	2	1	I Was On Death Row.....	dr A
1	9	—	I'm All Right, Jack (British).....	com A
—	4	3	In the Wake of a Stranger (British).....	mys-mel AYC
—	1	2	Incredible Petrified World, The.....	mel AY
—	6	8	Jack the Ripper (British).....	cri-mel A
—	1	2	Jailbreakers, The.....	soc-mel A
2	4	1	Jazz on a Summer's Day.....	mus-doc-c AY
—	3	2	Jet Over the Atlantic.....	dr AY
2	12	2	Journey to the Center of the Earth.....	sci-c AY
—	2	1	Jovanka and the Others.....	war-dr A
—	2	1	Key Witness.....	cri-dr A
2	7	2	Kidnapped.....	adv-c AYC
—	9	4	Killers of Kilimanjaro, The.....	mel-c AY
2	8	5	Last Voyage, The.....	dr-c AY
—	3	—	League of Gentlemen (British).....	cri-com A
—	1	2	Leech Woman, The (British).....	mel A
—	7	3	Lesson in Love, A (Swedish).....	dr A
—	2	1	Little Rascals Varieties.....	com AYC
—	3	—	Lost World, The.....	sci-mel-c AY
—	2	1	Love Specialist, The (Italian).....	com-c A
—	—	3	Macumba Love.....	mel-c A
—	2	1	Malaga.....	dr A
2	3	—	Man in a Cocked Hat (British).....	com AY
—	7	3	Man on a String.....	dr AY
3	8	—	Masters of the Congo Jungle.....	doc-c AYC
—	4	1	Mating Urge, The.....	doc-c A
—	3	2	Men Who Tread on the Dragon's Trail, The (Japanese).....	war-dr A
—	4	2	Michael Strogoff (French).....	dr-c AY
—	2	1	Mischief Makers, The (French).....	dr A
—	—	3	Missile to the Moon.....	sci-mel A
—	—	3	Monika (Swedish).....	dr A
—	6	2	Mountain Road, The.....	war-dr AY
—	—	3	Mugger, The.....	cri-mel A
—	—	3	Music Box Kid, The.....	cri-mel A
—	2	2	My Dog, Buddy.....	com AYC
—	2	1	Never Take Candy from a Stranger (British).....	soc-dr A
—	2	1	Nightfighters, The.....	war-dr AY
—	2	1	Noose for a Gunman.....	wes AYC
—	3	2	Nude in a White Car (French).....	mys-dr A
—	1	6	Oklahoma Territory.....	wes AYC
—	3	—	One Foot in Hell.....	dr-c A
—	3	—	One-Eyed Jacks.....	wes-c A
—	6	1	Operation Amsterdam (British).....	mys-mel AYC
2	9	5	Our Man in Havana (British).....	nov A
—	2	2	Pay or Die.....	mel A
—	2	3	Platinum High School.....	soc-mel A
3	7	6	Please Don't Eat the Daisies.....	com-c A
—	8	1	Poacher's Daughter, The (Irish).....	com AYC
4	6	1	Pollyanna.....	com-c AYC
—	3	1	Portrait in Black.....	dr-c A
—	2	5	Pretty Boy Floyd.....	cri-dr A
—	—	3	Prime Time, The.....	soc-doc A
—	1	3	Prisoner of the Volga (Italian).....	war-dr-c AY
—	—	3	Private Lives of Adam and Eve, The.....	com A
—	2	6	Private Property.....	dr A
—	1	2	Proper Time, The.....	soc-dr A
—	—	3	Pull My Daisy.....	soc-doc A
—	5	5	Purple Gang, The.....	cri-dr A
—	2	8	Pusher, The.....	cri-mel A

A	B	C		
1	3	1	Rat Race, The.....	dr-c A
—	6	—	Raymie.....	dr AY
—	2	1	Reach for Tomorrow.....	soc-dr A
—	3	—	Rhapsody of Steel.....	doc-c AYC
—	5	—	Rikisha Man, The (Japanese).....	dr-c AY
—	8	5	Rise and Fall of Legs Diamond, The.....	cri-mel A
—	2	3	Savage Eye, The.....	doc-dr A
—	3	—	Savage Innocents.....	adv-c AY
—	11	5	Scent of Mystery.....	mel-c A
—	—	3	School for Love (French).....	dr A
—	3	—	September Storm.....	dr A
—	—	—	Sergeant Rutledge (See Trial of)	
1	11	1	Seven Thieves.....	cri-mel A
—	—	3	Sexpot Goes to College.....	com A
—	—	3	She Was Like a Wild Chrysanthemum (Japanese).....	dr A
—	3	—	Sign of Zoro.....	adv AYC
1	11	4	Sink the Bismarck (British).....	war-dr AYC
—	2	1	Sins of Youth (French).....	dr A
—	1	3	Ski Troop Attack.....	war-mel AY
—	3	—	Skyscraper.....	doc-c AYC
1	5	1	Snow Queen, The (U.S.S.R.).....	car-c AYC
1	3	—	Song Without End.....	mus-biog-c AY
2	3	—	South Pacific.....	mus-dr-c AY
—	1	2	Speaking of Murder (French).....	cri-dr A
—	—	2	Storm of the Pacific, The (Japanese).....	war-dr-c AY
1	4	—	Story of Ruth, The.....	dr-c AYC
2	7	7	Story on Page One, The.....	dr A
—	1	2	Strangers When We Meet.....	dr-c A
—	—	3	Stranglers of Bombay.....	mel A
—	2	1	Subterraneans, The.....	mus-com-c A
1	4	10	Suddenly Last Summer.....	dr A
—	2	1	Summer of the 17th Doll (British).....	dr A
—	2	1	Sword and the Cross, The (Italian).....	dr-c AY
1	4	9	Tall Story.....	com A
—	—	3	Teenage Zombies.....	mel AY
—	4	1	Terror Is a Man.....	sci-mel A
1	10	3	Third Voice, The.....	cri-dr A
—	3	5	13 Fighting Men.....	war-dr-c AYC
—	2	1	39 Steps, The (British).....	mys-mel-c AY
—	5	6	This Rebel Breed.....	soc-mel A
—	2	6	Threat, The.....	cri-mel A
—	1	5	Three Came to Kill.....	mys-mel AYC
1	6	7	Three Murderesses (French- reissue).....	com-c A
—	2	1	Thunder in Carolina.....	mel-c AY
1	12	1	Tiger Bay (British).....	cri-dr A
1	6	1	To Live (Japanese).....	dr A
3	10	1	Toby Tyler.....	com-c AYC
—	3	8	Too Soon to Love.....	soc-dr A
—	9	7	Touch of Larceny, A (British).....	com A
—	8	2	Trial of Sergeant Rutledge, The.....	war-dr-c A
—	2	3	Twelve Hours to Kill.....	cri-mel AYC
—	3	—	Twelve to the Moon.....	sci-mel AYC
—	2	1	Under Ten Flags (Italian).....	war-dr A
2	9	4	Unforgiven, The.....	wes-c AY
—	3	4	Valley of the Redwoods.....	mel A
—	3	6	Vice Raid.....	soc-mel A
—	6	3	Virgin Island (British).....	com-c AY
—	2	2	Virgin Sacrifice.....	adv-c A
—	5	6	Visit to a Small Planet.....	com AY
—	8	4	Wake Me When It's Over.....	war-com-c AY
—	—	3	Wasp Woman, The.....	cri-mel A
1	9	3	When Comedy Was King.....	com AYC
1	8	8	Who was that Lady?.....	com A
—	1	2	Why Must I Die?.....	soc-mel A
—	—	3	Wicked Go to Hell, The (French).....	dr A
—	2	1	Wife for a Night (Italian).....	dr A
—	3	1	Wild River, The.....	dr-c AY
—	9	3	Wind Cannot Read, The (British).....	war-dr-c A
1	2	1	World of Apu, The (India).....	dr AY
1	5	1	Would-be Gentleman, The.....	dr-c AY

The Consumers' Observation Post

(Continued from page 4)

IDENTITY STANDARDS for nine types of orange juice went into effect on June 1, 1960. The order issued by the Federal Food and Drug Administration provides standards for nine types of orange juice. The F. & D. Admin. denied a request for establishment of a standard for "industrial orange juice" with added sodium benzoate, sulfur dioxide, and other ingredients, intended primarily for restaurants and vending machines. (Thanks a lot for that, F. & D. Admin.!) It also turned down a request to allow Florida growers to use up to 10 percent of tangerine juice in orange juice products.

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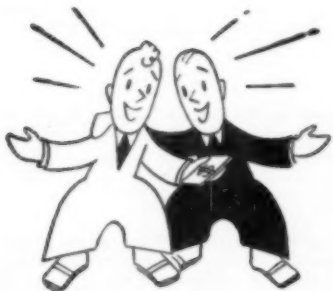
EMPHASIS ON PROMPT, EFFICIENT, AND ECONOMICAL SERVICING is one of the biggest factors in the large volume of appliance sales by Sears, Roebuck & Co. That was the conclusion of Home Furnishings Daily after a survey of Sears' operations in the Buffalo, N.Y., area, where the mail-order firm maintains its own service setup, has its own service trucks, and its own crews. It sells service actively as a part of its appliance operation, particularly for Kenmore automatic washers and dryers, Coldspot food freezers and refrigerators, and Kenmore gas and electric ranges. The journal notes that, since Sears sells its own private brands, made up for it by well-known appliance manufacturers, it is somewhat difficult for the consumer to do any comparison shopping against national brand appliances.

* * *

AMERICAN TEXTILES are beginning to feel the pressure of foreign competition. Cotton textiles, particularly, are available from Japan and several other countries at much cheaper prices than they can be manufactured in this country. It appears that the differential is due not solely to lower wages abroad or to new machinery furnished by U.S. funds allocated for foreign aid. According to testimony at a hearing before the United States Tariff Commission, the overwhelming price advantage of foreign cotton textiles comes from the 8 cents a pound subsidy on cotton sold abroad to enable domestic cotton, which is price-supported, to compete in the world market. The subsidy to cotton growers, it appears, is largely responsible for pricing the U.S. cotton fabrics out of the market.

* * *

AUTOMATIC IRONERS are being promoted by a novel technique. The appliance, which normally sells for about \$300, is being offered by Polk Bros. of Chicago for a rental of \$9 per month for a minimum period of three months.



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WHAT SIZE BED do you like to sleep in—twin, double, or king size? The current trend toward low-slung extra-wide beds is not in the best interests of the homemaker who has to make them up. Raymond S. Reed, columnist for Home Furnishings Daily, points out that the "dachshund" bed frame with "smooth 5/8 inch casters," darling of the designers, is physical torture to make up seven days a week. If he were doing it, he would produce a bed that could be advertised as "one which you can make in a comfortable, healthful, standing position."

* * *

WASH-AND-WEAR GARMENTS MADE OF COTTON may present shrinkage problems. The American Institute of Laundering points out that cotton does not have the inherent non-shrinking properties of synthetic fibers and that it must be pre-shrunk to hold its marked size. In addition, the A. I. L. reports that cotton fabrics, including wash-and-wear, require ironing or pressing to prevent the fiber's normal relaxation shrinkage. The type of sewing thread and the tension under which a garment is sewed may also cause trouble, for if the shrinkage of the thread exceeds that of the fabric there will be unsightly wrinkling and even a change of dimensions, at the waistband of trousers, for example.

* * *

NEW OR NEWLY TESTED:

Fabspray (Nu-Color Corp. of America, Los Angeles 6, Calif.) Spray application kit, 12-oz. pressurized spray can with envelope of BAF fabric cleaner, \$2.99. Wedgewood blue. The product is advertised as "sprays new life and color into faded fabrics in minutes." In tests made by Consumers' Research on an upholstered armchair, the product was found very easy to apply, although there was considerable mist that would be inhaled by the person doing the job. The quantity of spray material in one can was not sufficient to complete the job on one medium sized Lawson-style armchair. Another drawback was that if the job is done at one time, it is quite tiring to hold one's finger on the spray nozzle continually. Badly faded areas were not completely rejuvenated. The color crocked considerably. Even after several weeks of drying, the crocking still took place. It would appear that the product would be suitable only on a rug—as is also suggested in the advertising—on some other household item that would not come into contact with light-colored garments and where a tendency to crock would not be a disadvantage.

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Concluding test findings on the new outboard motors

ALTHOUGH most outboard motors nowadays are equipped with various devices and means to reduce the amount of acoustical noise produced by the exhaust and by the reciprocating and rotating parts, it must be admitted that the motors still make a good deal of noise. The outboard industry is well aware of the noise problem, however, and each year finds additional improvements incorporated in the designs. The problem is indeed an important one, for it is anticipated that, as the use of outboards continues to expand, legislation will be enacted to regulate and control these motors, just as legislation prohibits use of automobile engines without proper mufflers.

The results of one series of tests made of the 1960 model outboards indicate that there is another problem—namely that of electrical ignition “noise”—which should also be considered. This is a serious problem with the larger motors, particularly, and also in those instances where a pair of moderate-powered motors are used together. It may often be the case that a boat owner will

wish to use a radio or television receiver, or operate direction-finding or depth-finding equipment while under way. In such instances, electrical ignition noise may be sufficient to spoil reception from or operation of the equipment. Ignition noise was emitted by all of the motors tested but was judged satisfactorily low in the smaller motors and not likely, with those, to present the difficulties previously mentioned.

An unfortunate and alarming outcome of the increasing use of outboards of higher horsepower has been an increase in the number and severity of accidents, caused no doubt by the failure of boat owners to apply the greater care and skill that should go with the use of high-powered equipment. As a result, personal liability insurance costs more for large motors (above 10 horsepower). The extra annual premium on a 35-horsepower outboard, for example, may amount to about \$8.

In the previous article, which was included in (Concluded on page 24)

Results of performance tests of the 1960 outboard motors*

Brand	Hp., rated	Performance at maximum speed			Performance at approximately 80% of full throttle				Maximum static pull, pounds	Trolled smoothly at m.p.h.,**	Relative electrical ignition noise
		Max. speed, m.p.h.**	Gal. of fuel per hour (Calc.)	Miles** per gal.	rpm.	Speed**	Gal. fuel per hour (Calc.)	Miles** per gal.			
Elgin	7½	7.9	0.9	9.2	3550	6.3	0.7	9.6	100	1.0	Low
Elgin	25	22.5	3.1	7.3	3850	17.5	3.0	5.7	400	1.3	High
Evinrude	5½	7.0	0.8	8.8	3300	5.5	0.6	9.2	90	1.0	Low
Evinrude	18	20.3	2.5	8.2	3700	16.2	2.1	7.6	230	1.2	Low
Gale	25	24.6	4.5	5.5	3700	21.5	2.6	8.2	380	1.2	High
Johnson	10	14.5	1.4	10.0	3650	12.0	1.2	10.0	120	1.2	Low
Johnson	40	27.2	4.2	6.4	3575	21.6	3.0	7.2	410	1.3	High
Mercury 100	10	16.0	1.6	10.0	4300	13.0	1.3	10.1	160	1.1	Mod.
Mercury 200	22	23.2	2.6	9.0	4200	18.5	2.0	9.2	200	1.3	Mod.
Scott	25	22.7	3.1	7.2	3900	17.0	3.0	5.7	400	1.3	High

* All tests were made in the same 14-ft. boat—a modified planing hull weighing 460 lb.—with 2 crew members and the required fuel and test and safety equipment.

** Nautical mile. 1 nautical mile equals 6075 ft. To convert from nautical miles (given) to statute (land) miles, multiply by 1.15.

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